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PÓS-GRADUAÇÃO EM LETRAS-INGLÊS

IMAGINED SPACE:
REPRESENTATIONS OF THE FUTURE CITY IN SCIENCE FICTION SHORT STORIES BY FORSTER, BALLARD AND GIBSON

por

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To everyone at the PGI.

To Capes.

To M.

ABSTRACT

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1997

Supervising Professor: Susana Funck

This research is an attempt to map the changes imputed to the representations of the city in three science fiction narratives of distinct periods: E.M.Forster's "The Machine Stops"(1928), J.G.Ballard's "The Illuminated Man" (1966) and William Gibson's "Johnny Mnemonic"(1987). Through an analysis of setting, character interaction and the various elements that help create an urban environment in textual form this research takes on to examine and compare these representations taking as its starting point the ongoing discussion around modernism and postmodernism.

RESUMO

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Orientadora: Susana Funck

O presente estudo tenta mapear a differenças na representação das cidades em três estórias de ficção científica de diferentes períodos: E.M.Forster e "The Machine Stops" (1928), J.G.Ballard e "The Illuminated Man" (1966) e, por último, William Gibson e "Johnny Mnemonic" (1987). A partir de uma análise de *setting*, interação entre personagens e dos vários outros elementos que fazem parte da criação de um ambiente urbano sob forma textual este estudo procura estabelecer parâmetros de leitura para estas representações.

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I always feel like one of the guys inside those incredible dragons you see snaking through the crowds in Chinatown. Sure, the dragon is very brightly colored, but from the inside you know the whole thing is pretty flimsy -- just a bunch of old newspapers and papier-maché and balsa struts.

(William Gibson)

GETTING STARTED: INTO OUTER SPACE WE GO?

OR

HOW TO DISGUISE AN

I N T R O D U C T I O N

The most beautiful thing in Tokyo is MacDonald's.
The most beautiful thing in Stockholm is MacDonald's.
The most beautiful thing in Florence is MacDonald's.
Peking and Moscow don't have anything beautiful yet.
(Andy Warhol)

A Word of Warning:
Dissertation Titles
or
Self Destruction Begins in...

The present study proposes to discuss future cities in three science fiction narratives (about which more below). The reader might thus be easily led to think of architecture as its main focus. It becomes necessary, therefore, to point out that this dissertation deals less with architecture itself (its practical, physical realities) than with "representations" of architecture, that is, its symbolic appearance in science fiction literature.

In other words, urban space is not understood here as merely the representation of a physical structure but as arena for human action. Therefore, this study examines the future city to map the kind of interaction between man and his environment that is favored in each of these representations.

If asked to provide for a single justification for this kind of study, anyone will be quick to point out that a number of science fiction narratives evoke cities in their background.

Thus, the stories analysed here -- chosen because they seem to dwell longer on the subject of urban space and were written in distinct times -- offer the perfect opportunity for mapping changes in the meanings of urban space. We will be dealing with E.M.Forster's "The Machine Stops" (1909), J.G.Ballard's "The Illuminated Man" (1966) and William Gibson's "Johnny Mnemonic" (1987).

The Space of Modernism

Cities (and their representation) take part in a long tradition. Modernism (or at least its literature) has been said to be "an art of cities, especially of the polyglot cities ... which, for various historical reasons had acquired high activity and great reputation as centres of intellectual exchange" (Bradbury 96).

In spite of the difficulty in reaching a consensus for a definition of modernism, several critics -- from Walter Benjamim, Theodor Adorno, Raymond Williams to Jürgen Habermas -- have at least one common belief:[1] that it was with the emergence of the metropolis, the off-spring of the industrial revolution, that modernism was able to set its roots as an ideological currency powerful enough to affect society. The perception of the emigreè, says Raymond Williams, much helped to create in the "City of Strangers, the most appropriate locale for [modern] art..." (Williams 34). Metropolitan cities such as Vienna, Berlin, London, Paris and New York provided the environment for certain themes in the arts and culture to gather momentum and be named "modern" after their more or less explicit relation to the urban landscape.

Raymond Williams, in "Metropolitan Perceptions and the Emergence of Modernism", an essay relating the development of the city with the emergence of a new sensibility (the kind of sensibility forwarded by modernism), identifies and describes four major themes to occur in modernist literature as a response to the expanding notion of the metropolis. For Williams these four themes are:

-the crowd of strangers;

-the individual, lonely and isolated within the crowd;

-the social emphasis on alienation in the city;

-the "impenetrability" of the city.

Around these issues, a number of artistic forms (languages) were developed and circulated as specific responses to the urban environment of the early century,[2] that is, the 'modern' metropolitan environment of the turn of century coincides, overlaps and becomes inextricably associated with the (so-called) modernist sensibility of the late nineteenth century. These industrial sites not only provide the appropriate locale for the 'new' to emerge, but this 'new' can only exist in and because of such environment (Williams 39). (See figure 1)

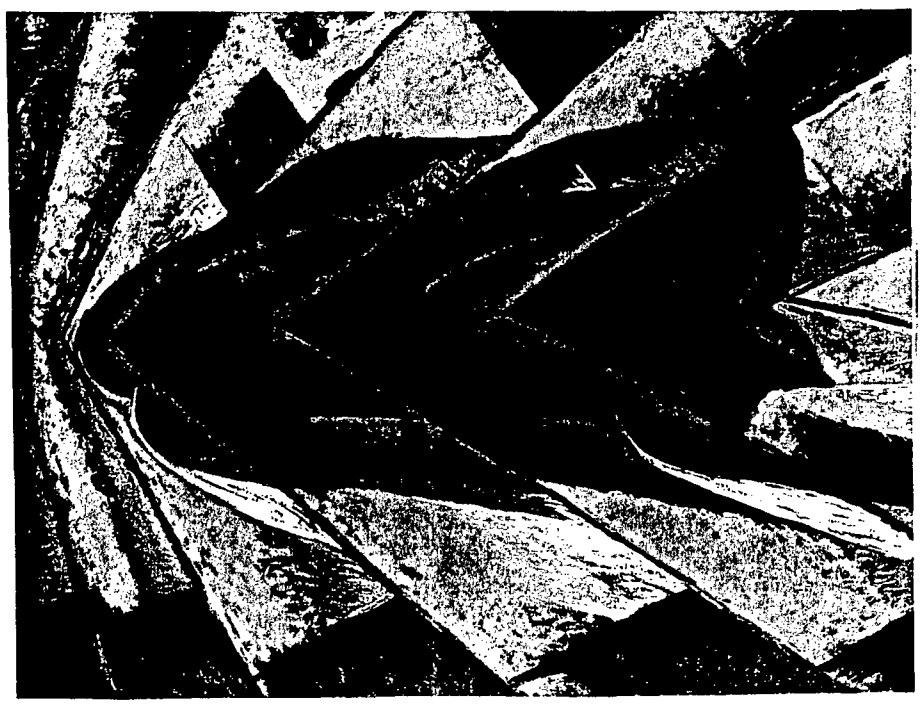

Fig.1. Luigi Russolo. Dinamismo di un'automobile. 1912/13. Oil on canvas. rpt. in Maurizio Calvesi, Der Futurismus: Kunst und Leben (Köln: Benedikt Taschen, 1987) 87.

Thus, it is in the great metropolitan city that Baudelaire will find himself plunging "in the depths of the unknown to find the new ('au fond de l'inconnu pour trouver du nouveau')", as he says at the end of the cycle "La Mort" (Adorno 235), or that Filippo Marinetti and his associates will pay tribute to the power of the machines in their Futurist interpretations of the dynamics of space in the 'modern' city, and that the Russian avant-garde will find its most elaborate expression. (See figures 2 and 3)

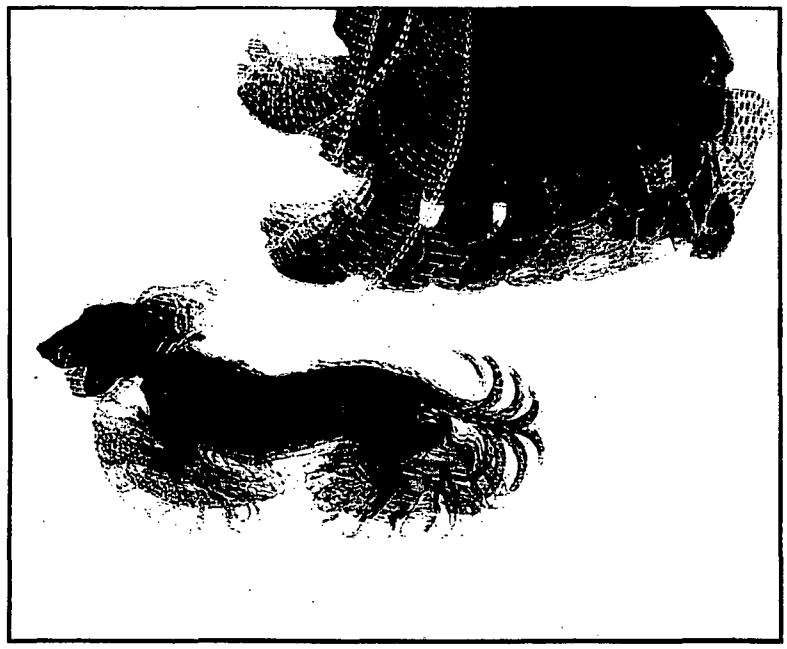

Fig.2. Giacomo Balla. Dinamismo di un cane al guinzaglio, 1912. Oil on canvas. rpt. in Maurizio Calvesi, Der Futurismus: Kunst und Leben (Köln: Benedikt Taschen, 1987) 111.

However, all this is far from simple. The "make it new" of the modernists (Ezra Pound) can become problematic when compared to Adorno's notion of Modernity: the 'new' is intimately connected, bound with consumer society. It is "the formula by

which a stimulus is extracted from dread and despair" (Adorno 235). Thus, the 'new' is a shock that produces and contains the possibility not only of renovation but also of definition. As it happens, for Adorno, this formula is "the precise reply given by the subject to a world that has turned abstract, the industrial age" (Adorno 235). Thus, it is precisely the landscape of the industrial age, the modern metropolitan cities of Europe and America, that has turned into an abstract environment: the cityscape. Not only does this space defy the possibility of freeing the individual, it also circumscribes and assigns very specific responses to his experiences.

Fig.3. Stenberg brothers. *Man with a movie camera.* Advertising poster for the film. Lithograph, 1929. rpt. in Dawn Ades, The 20th Century Poster: Design of the Avant-garde (New York: Abbeville Press, 1984) 74.

Under this light the rebellion of the eternally new is nothing but the product of a consumer's society for which nothing can actually be new anymore. "The cult of the new, and thus the idea of modernity, is a rebellion against the fact that there is no longer anything new. The never-changing quality of machine-produced goods," continues Adorno, "the lattice of socialization that enmeshes and assimilates equally objects and the view of them, converts everything encountered into what always was, a fortuitous specimen of a species, the *doppel-gänger* of a model" (Adorno 235).

The relevance of Adorno's views to our investigation of the representations of cities becomes quite explicit if one thinks of two simple facts: First, the extensive use -- by postmodern critics -- of the fragmentation / atomization of the human subject from the realms of the world, indeed of the "exhaustion" of the representations of the real (of which more below and throughout Chapter II) and, second, of science fiction's repeated interest in describing the wonders (and dangers) of highly technological societies. Adorno further relates the new with consumer society:

> The new is ambivalent in its enthronement. While it embraces everything that strives beyond the oneness of an ever more rigid established order, it is at the same time absorption by newness which ... decisively furthers the decomposition of the subject into convulsive moments of illusory living, and so also furthers total society, which modishly ousts the new. (Adorno 237)

The Space of Postmodernism

Our postmodern times have witnessed if not the slow disappearance of the cities of Modernism at least the exhaustion of their representation. From under several layers of human activity (cities and their representation have existed now for centuries, "changing faster than the human heart"[3]), a dense network of communications (buildings, traffic of cars and information systems) has swallowed up the urban space that was once so characteristically associated with the cities of Modernism.

Spreading itself to the infinite, the contemporary urban environment has contaminated the landscape in proportions never seen before. Turning everything into a replica of itself, "a world transformed into sheer images of itself" (Jameson 221) the contemporary urban environment has both exhausted and magnified the early images of the Modernist city. It has exhausted the early representations of the Modern city perhaps in the same sense that language, as it becomes soiled by stereotypes, ceases to affirm reality and begins to hide it. Thus, contemporary cities can only parody early Modernist monuments, no longer affirming their reality. The contemporary urban environment magnifies the proportions of the Modern city in the sense that its cityscape reproduces to the infinite, in a never ending pattern of repetitions and parodies that refuses to come to halt, the small scale environments of early century urban landscape.

Having thus ceased to exist as this ideal space where all art, indeed all function, follows form; a place where time and space coexist seamlessly controlled by some pivotal force, the

postmodern, contemporary urban landscape evolves to form a rather dense (but dispersed) network of information where identity, orientation and life are ultimately geared towards commodified chaos, towards a "random cannibalization of all the styles of the past, the play of random stylistic allusion" (Jameson 220).

Fig.4. Also a boundless cityscape? Chicago at night with the Helmut Jahns Illinois State Center. rpt. in Christian W.Thomsen, Architectur Phantasien: von Babylon bis zur Virtuellen Architectur (München: Prestel, 1994) 169.

These magnified urban landscapes not merely play at the center of human interaction now, they seem to have brought about a change in the very character of the people who inhabit them. To understand that, many observers have taken up the city as a subject of study. Artists, critics, architects and philosophers

have devoted their time to studying the city. In an essay on Times Square, for example, American artist and critic Barbara Kruger has called New York City a "dense cluster of civilization" (Kruger 16). Remembering that "cities remain national treasures: sites of forced proximity and edgy experiments in density and inclusion" (Kruger 18), she calls attention to the human subject lost in this space. Kruger is best known for her disturbing artworks, curious combinations of words and images -- designed and displayed in public spaces very much like advertising campaigns -- which are used to subvert the language of advertising and produce estrangement in the urban landscape.

When, in 1984, Fredric Jameson writes about the celebration and denial of the outside world in John Portman's Bonaventura Hotel, Los Angeles,[4] (see fig.5), he produces a proposal on the meaning buildings -- such as the Bonaventura Hotel -- can have in the oversized territories of mammoth cities as ('spatially') big as Los Angeles. Less academic books, such as Jerry Herron's *AfterCulture: Detroit and the Humiliation of History*, have also attempted to throw some light on the meaning of urban space, its relations to violence, degradation of life-standards in urban centers and ended up with instigating readings on cities, their representation and their meaning as urban space to our postmodern lives.

Robert Venturi and his associates became famous for *Learning from Las Vegas*, a book in which proposals for reading contemporary architecture anew from its apparently empty contexts has been thoroughly worked out. Initially aimed at architecture students and scholars, *Learning from Las Vegas* has quickly become a reference text for Postmodern thought. Its strategy -- having

now long surpassed its field -- proves an intriguing way of understanding (reading) the contemporary cityscape by means such as the mapping of its surfaces, the circulation of information, etc.

Fig.5. The Bonaventura Hotel and its imploded monumentality: in Jameson's views, a celebration and denial of the outside world. Photograph by the author, 1990.

According to Scott Bukatman, another valuable work that "outline[s] the history, not only of urban growth but of urban representation (from Baudelaire to Fritz Lang)" is *Visions of the Modern City: Essays in History, Art, and Literature* by William Sharpe and Leonard Wallock. Their collection of texts, says Bukatman, is an interesting investigation of the artistic representations of the city in classical and modernist modes, that demonstrates "an ongoing demand to produce a legibility from the chaos which characterizes the surface of urban existence"

(Terminal Identity 123). However, Bukatman notes, "there remains one startling elision in their survey. Science fiction, a genre which has -- since its inception -- assiduously produced an imaging of the city in stories, novels, films, comic books, and illustration, goes entirely unmentioned." (Bukatman, Terminal Identity 123). From this apparent gap in Wallock and Sharpe's investigation, our study will -- more precisely -- deal with three distinct representations of urban environments in science fiction in an attempt to map the changes occurring in these representations from a modernist to a postmodernist period.

Additionally, Scott Bukatman's own book, *Terminal Identity*, is an attempt to answer why, in contemporary times, it has become "increasingly difficult to separate the human from the technological" (2). Proposing an engaging reflection on the expanding meanings of humanity throughout the technological age, he sets the moment when an important change took place in our conceptions of urban space:

> The space age thus overlaps postmodernism, but postmodernism really gets going around the *exhaustion* of the Space Age; the end of that period of aspiration, centralization, technologization , and expansion. Now the inertial shell of the personal computer replaces the thrusting power of the Saturn V as the emblem of the technological culture. Invisible spaces now dominate, as the *city* of the modernist era is replaced by the *non-place urban realm* and *outer space* is superseded by *cyberspace*. (Terminal Identity 2)

Because Bukatman's gives science fiction narratives the same amount of importance given by other critics to more traditional

genres, there will be a strong reliance on his material (from *Terminal Identity* and other essays) throughout this study.

Overlapping Territories: Science Fiction and the City

The representation of cities, or urban space, not only plays at the center of science fiction texts, but it can also be argued that -- especially in science fiction film, where this fact is more than apparent[5] -- the genre becomes inextricably bound with the construction of a special iconography of the city. As Janet Staiger reminds us, "one of the most immediate signifiers of the genre of science fiction is the representation of a known city in which readily distinguishable sections of today's cityscape are present but other parts are rewritten" (Staiger 20).

Another interesting view on the issue can be gathered from the pages of film criticism. As Pierre Sorlin points out, in his book *European Cinemas, European Societies- 1939-1990*, although "many cinematic narratives take place in towns ... an urban background does not necessarily mean that a town is featured on the screen", that is, in film as in fiction we are dealing with images not with geography (112). In this sense, only a few evocative shots (or words) are sufficient to describe / characterize one area, one place. That is, although films do not stand for geographical "accuracy" in the description of places, they stand for the recreation of an entire environment from a few of their specific characteristics. This production, that Sorlin calls "poetic background", is of utmost importance for science fiction. A similar notion derived from Fredric Jameson's term, "totalizing gaze" is used by Scott Bukatman to characterize the

representation of urban spaces offered by science fiction. For Jameson, it is this "totalizing gaze" that enables science fiction narratives to construct coherent views of a city or urban space from a few words or descriptions.

Jameson's term follows the same idea Sorlin has developed, but translates its application more specifically to science fiction. The "totalizing gaze" is the creation, with a few evocative words and / or shots, of a complete overview of cities as future urban environments. Science fiction then enables a representation of life in the future that is concise but nevertheless extremely powerful.

In this sense, science fiction as a genre not only is often at pains with describing, exposing and visualizing life in the cities of the future, but it also helps "rewrite" and displace the cities of today by reorganizing and transforming our representations of them. Thus, an investigation of the ways future cities have been represented in science fiction narratives can reveal much about our own cities of today. Bearing this in mind, this study proposes to analyze the possible relevance of the theme as stated by science fiction's rich background on urban representation and attempts to map and contextualize -- within our own twentieth century -- changes in the representation of the city (urban space) in a selection of science fiction texts from the modernist to the postmodernist period. The major focus will be on setting and the various elements of plot used to characterize urban space in three science fiction short stories, one by E.M.Forster, one by J.G.Ballard and one by William Gibson. William Gibson is the theme of Chapter III of this study with "Johnny Mnemonic" (1987), while Ballard and Forster are presented

in Chapters II and I, with "The Illuminated Man" (1966) and "The Machine Stops" (1909), respectively.

Finally, it would be quite interesting to remember a point raised by another film critic, Bruce Franklin, in his article "Visions of the Future in Science Fiction Films from 1970 to 1982". According to Franklin, we need to evaluate the reasons why so many of the cultural projections forwarded by the American science fiction movie industry actually depict / present environments in which a total failure of the social structure is more than apparent. For Bruce Franklin the answer is clear: science fiction movies should be viewed as warnings from a society which has practically destroyed (imploded) itself but which, as yet, has not been totally able to recognize and assimilate its own failure. Given the hegemony of American cultural politics in many parts of the world, he continues, it should seem not only advisable, but also desirable that "we must be cautious in making inferences from these despairing visions of the future" (Franklin 31).

Although this research does not have the American science fiction film as its major focus (only one of the narratives included in this study is American and only half a chapter is dedicated to a film adaptation), and in spite of science fiction's abolishment of positionalities, still I would like to take Bruce Franklin's advice seriously and proceed with caution in my investigation of the possible meanings that the representations of the future city in science fiction narratives can take. Because cultural products largely survive our own social environment, science fiction's films and texts should be carefully reviewed.

The Space of Science Fiction

> If poets are the unacknowledged legislators or the world, science-fiction writers are its court jesters. We are Wise Fools who can leap, caper, utter prophecies, and scratch ourselves in public. We can play with Big Ideas because the garish motley of our pulp origins makes us seem harmless.
> (Bruce Sterling)

Perhaps because of its popularity or, as Bruce Sterling has aptly put it, because of its "pulp origins", science fiction has never been given much credit in literary criticism. Mentioning the *Star Trek* series as exemplary of a saga of the twentieth century, not of the twenty-third century, Scott Bukatman tries to revert this situation by affirming that science fiction has always been a genre concerned with representing the present and not the future (Terminal Identity 116). As if this simple statement were not curious enough to call for a discussion of the genre, J.G. Ballard, the much quoted "New Wave"[6] science fiction writer, observes that "the future is a better key to the present than the past" (User's Guide 205). Bukatman continues further and proposes science fiction's relevance as a genre "to parallel the ontological redefinitions of the electronic era" (Terminal Identity 116), that is, the effects and interpenetrations of terminal space (electronic, simulated space) into real, physical space. As "an ambiguous region which falls between reality and simulation" (Terminal Identity 104), terminal space can be

> entered through the panoply of computer games found in arcades, pizzerias, and the home, through the

> flight simulators used by the airline industry and the military, and through programs developed by the sciences to model realms heretofore invisible. Terminal space is the realm of virtual reality and real-time, interactive computer-generated environments. (Bukatman Terminal Identity 107)

Stated with different words, the same issue, as Bukatman notices, concerns, again, J.G.Ballard:

> I feel that the balance between fiction and reality has changed significantly in the past decade. Increasingly their roles are reversed. We live in a world ruled by fictions of every kind... We live inside an enormous novel. For the writer in particular it is less and less necessary for him to invent the fictional content of his novel. The fiction is already there. The writer's task is to invent reality. (qtd. in Bukatman Terminal Identity 116)

For Bukatman, science fiction offsets the loss of the human in the labyrinth of telematic culture by turning it into an arena still liable to human control. (Terminal Identity 118)

Apart from Scott Bukatman's and J.G.Ballard's observations, the feeling that we are living a 'terminal life' inside an 'enormous novel' may be sensed in the academic discussions of the nineties as well. Critics and observers such as Guy Debord, Jean Baudrillard, and Fredric Jameson have all produced -- even if they are not primarily concerned with -- related readings on the meanings of space (especially urban) to our era.[7] Their emphasis on the metaphors of the spectacle, simulation, pastiche and appearance -- as elements that are all part of contemporary urban

space -- seem to emphasize science fiction's relevance as a genre that provides substantial insights on what Scott Bukatman calls the 'terminal spaces' of postmodernism, that is, "the realm of virtual reality and real-time, interactive, computer-generated environments" (Terminal Identity 107).

Furthermore, Scott Bukatman observes in "Who Programs You?"[8], that Debord's 'Society of the Spectacle' "begins by acknowledging the passage into a new mode of phenomenological and commercial existence" (197). This new mode of "phenomenological and commercial existence" referred to by Debord can be summarized (for our purposes here) by mainly relating this passage to the rejection (by the spectacle) of all traditional humanist values and concepts. Values such as identity or subjectivity (as traditionally understood by humanism) are replaced by the spectacle for their more profitable counterparts: exchange value and surface values are epitomized by the spectacle in order to control the subject by maintaining it bound to the satisfaction of the pseudo-needs created by the spectacle itself. In this sense, Debord's *Society of the Spectacle* draws on this new 'phenomenological and commercial' existence to function as a source of control, an instance of phenomenological instabilities:

> The whole life of those societies in which modern conditions of production prevail presents itself as an immense accumulation of *spectacles*. All that once was directly lived has become mere representation. (Debord 12)

To what degree some of these features can be sensed in the representation of the urban environment in science fiction's

narratives is also one of the questions that this study addresses.

Images of cities are abundant in both modernist and postmodernist science fiction narratives. The postmodern sites of the city as a fictional device, the city as magazine, (Herron 102), the city as theme-park (Sorkin 205) or even the city as the boundless 'coded landscape' of multinational capital[9] (Ballard, TB 147) have been remarkably and consistently characterized by science fiction. The same happens with the modernist visions of the city. In the science fiction texts and films of the High Modernist period one finds both a privileging of the industrial utopia and of some of modernism's most peculiar characteristics, clearly summarized by its submission of form to function (Bauhaus-Dessau).

Therefore, if our study aims at investigating the sources of the many alternate visions of urban space in science fiction narratives, it is (mainly) because no other genre has produced so many (and at times so different) representations of the city. In this sense, science fiction's readings of cities seem to accurately reflect the conventions and sensibilities of each particular period. For reasons of contextualization, a brief review of these visions and the texts in which they appear is presented below.

Science Fiction Literature:

Even in the seminal science fiction texts of the early century, in which an urban environment does not exactly figure as the theme of the novel, background utopian and / or dystopian villages play subversively at the center of the narrative.

Exemplary of this relationship are H.G.Wells' classic pre-modernist science fiction texts, *The Island of Dr.Moreau* (1896) and *The Invisible Man* (1897). It can be said that in both these novels -- but specially in *The Invisible Man* -- the events reach their subsequent development only because the urban environment (cities, villages) portrayed have not yet reached the urban-conglomerate boundlessness of William Gibson's 'sprawl' and of most of our cities today. The representation of space in both novels functions in relation to the plot as the holding force against which the 'aliens' and 'outsiders' are confronted. Much of Debord's 'spectacle' is not yet apparent here, for solution is still possible because the individual has not yet been totally cut-off from reality or depleted of its "capacity to function as an aggregate force" (Bukatman Who Programms You? , 197). That is, humanity is still defined by the "small-scale" sum of its individuals, not by the "pseudo-needs" of the system itself, and the city is not boundless, it still displays the boundaries between its outside and its inside helping to define and mark its inhabitants.

Urban space takes over, as a major concern of science fiction, in the early technological literary utopias / dystopias of the modernist period. Both E.M.Forster's short story "The Machine Stops" and Arthur C. Clarke's novel *The City and the Stars*, for example, present completely dependent human beings nurtured by absolute technological environments. Underlaying the acknowledged classic technocratic science fiction texts of Orwell (*1984*) and Anthony Burguess (*A Clockwork Orange*) there seems to be a concern with the control and uses of space. Both the American science fiction author Philip K.Dick and the British

J.G.Ballard introduce science fiction to new forms of unfunctional urbanism (Bukatman, Terminal Identity 121) in their novels. And the transformations in the representation of the urban environment that take place in contemporary science fiction texts and that promptly seem to reflect ongoing changes in our own 'reality' is, almost explicit in the recent science fiction of William Gibson and Maureen F.McHugh.[10] The urban spaces presented by these authors exploit the frontier in which the interaction between humans and machines has become the rule of the day, altering much of our perception of the environment. This list could continue *ad infinitum* since science fiction has become "explicitly involved in a cognitive and phenomenological 'writing' of new urban spaces" (Bukatman Terminal Identity 123).

Science Fiction Films:

In science fiction films these changes become even more tangible. Even if regarded from a strictly visual perspective, early science fiction films -- such as Lang's 1926 *Metropolis*, William Cameron's adaptation of H.G.Wells' *Things to Come*, or even the less successful screen fantasias of David Butler's 1930 science fiction 'musical' *Just Imagine* and Maurice Evey's 1936 remake of *The Tunnel* -- all reflect the clear modernist dispositions of their architectural designs and uses of scenographic space.

A change in science fiction's representations of the city can be felt in the designs of science fiction movies in the second half of our century. Science fiction films from the 50s, 60s and 70s (apart from their cold-war anxiety sub-tones) all seem to display an increased mix of high modernist precepts and

beliefs with a few of what later was to become identified as postmodernism's early features. In their representations of the urban environment, Stanley Kubrick's superbly serious *2001, A Space Odyssey*, George Lucas' somber *THX 1138*, Richard Fleicher's dark and impressively dramatic *Soylent Green*, and Crichton's doomed theme-park *Westworld*, all feature representations of future cities which can be contrasted with the representations of future cities of the high modernist period for a number of reasons.

If on the one hand the representations of urban space of these films already signals to "a denial of the outside world" (Bukatman Terminal Identity 126), on the other the image of these imploded spaces has not (yet) completely denied access to the outside world (Bukatman, Terminal Identity 126), nor made the city "pass beyond the sensory powers of the individual" (Bukatman, Terminal Identity 168) as it becomes explicit with postmodernism's representations of the future cities of late capitalism. Much to the contrary, a quest to escape this constrictive environment and to reach the outside is still possible. In a number of interpretations from this period, the lone-hero succeeds precisely because s/he continues to actively assimilate the urban space where s/he lives as a whole (see *Logan's Run* or *THX 1138*), instead of being passively assimilated, or, in Debord's terms, atomized, by this space.

Such relation, however, indicates a final moment of hope. In this sense, escaping only means that the hero is running away from the city it took Modernism decades to erect. Hence, many of the films of this period seem to dwell on the limbo produced by modernism's (now) exhausted conventions. As the changes -- slowly

gathering force -- that would finally transform the city in the ubiquitous "technological sprawl to the limits of infinity" (Bukatman, Terminal Identity 128) of postmodernism have not yet reached their peak, films such as these seem to represent a moment of transition between the two periods.

Contemporary science fiction films, such as Ridley Scott's Blade Runner, or the surreal fantasies of Terry Gilliam's Brazil, or even, more recently, the screen adaptation of William Gibson's short story "Johnny Mnemonic" by artist Robert Longo and Luc Besson's The Fifth Element, actually dwell on a completely different space: a world that seems to reflect not only a definitive movement away from the early modernist visions of the 20s and early 30s but also a movement away from the mixed propositions of the last three decades, as urban space -- defined in postmodernism -- by its collapsed coordinates, an imploded spatiality, a link in the disorienting, boundless chain of multinational capital, becomes an (if not the) absolutely irrefutable image of the future city in all these films.

In this sense, Scott Bukatman is right in saying that the city's environment in science fiction has been extensively and exhaustively (if not sometimes lavishly) depicted in both utopian and dystopian inscriptions (Terminal Identity 123). In moving from these utopian / dystopian narratives one can also outline and detect -- in a list of films as short as the one presented here -- a passage from Modernism's (Lang / Menzies) early visions of the nurturing, perfect city, to Postmodernism's final implosion of spatiality (R.Longo / T.Gilliam / R.Scott) and its "new conception of ... urban [space] no longer synonymous with locale" (Sharpe and Wallock, qtd. in Bukatman 122), passing

through a moment (in the decades that immediately followed the 50s) when science fiction films seemed to reflect -- with special keenness -- the first mixed interrogations of a society that saw its first "theoric monuments" crumble under the weight of a new era, the period of postmodernism's powerful doubts. In this sense it is valuable to conduct a research on the changes occurring in the representation of the city in science fiction narratives and try to contextualize them within our own twentieth century.

About this Dissertation...

In selecting the primary material for this research I was guided by two principles. First, given the nature and length of this study, I knew that my selection of texts from science fiction's rich tradition in representing future cities would be faced with a necessarily wide range of narratives and that that alone would frustrate any attempt to produce a very detailed mapping of the field. That is, any choices based on that premise would eventually prove flawed. Faced with this problem and the broad range of material science fiction offered me, I had to find another direction.

Second, because I was not afraid of letting my ideological constructs show, I have opted for privileging not the canonical narratives of science fiction nor the ones that represent, as Janet Staiger aptly puts it, "the trend in picturing the future" (Staiger 22) but decided to work from the margins of the genre. In this sense the answer pointed in this direction: the narratives analyzed here should have in common the fact that they dwell longer on the subject of urban space, giving its

representation more emphasis and affecting its plot in a more substantial way than other narratives regardless of their position in science fiction's canon. In other words, my first concern is not whether the narratives that figure in this study represent the best or worst of science fiction, but whether urban space seems to guide their interpretation. In this sense I have selected E.M.Forster's "The Machine Stops", J.G.Ballard's "The Illuminated Man" and William Gibson's "Johnny Mnemonic" because of their reliance on urban space to present their views of the future.

Another aspect of this study, one that should not go unnoticed, is that although the focus is on the written texts, it evaluates the more recent one, in conjunction with its filmed adaptation. There are reasons for that. Because "Johnny Mnemonic", the text itself, as it belongs to the cyberpunk movement, aims at destroying the limiting conventions of different genres, different codes in an interpolation of high and low culture only possible in our postmodern times, it should be appropriate that an analysis of its narrative should also include its filmed counterpart, the adaptation of its text by artist Robert Longo.

This fact, however, does not mean that our analysis of the film perfectly follows the contours of traditional film criticism or that it should be thought of as a step towards the direction of cultural studies. Our main concern in using the film here is to mirror in our analysis the initial proposal of the text itself in an attempt not to stray from cyberpunk's own directive.

NOTES:

[1]Each one of these scholars seems to have drawn his conclusions from an emphasis on a particular aspect of the term (its history, the changes in its meaning, the uses of the term throughout times), hence the impossibility of consensus on the terminology.

[2]Baudelaire's much quoted poem, "The Swan" (reproduced in the Appendix) presents a sample of Williams' modernist themes.

[3]See Baudelaire's poem, "The Swan", reproduced in the Appendix.

[4]The Bonaventura Hotel reflects inside the sense of loss of the space outside, thus celebrating and denying the outside world. (I am indebted to Professor S.Bellei for his insight on Jameson's analisys of the Bonaventura Hotel).

[5]As science fiction writer J.G.Ballard notes:

> Despite our heroic efforts, it is not the printed word but the film that has defined the images of science fiction in the public mind and also, incidentally, exerted a huge influence on architecture, fashion and consumer design. Even now the future is anything with a fin on it. (Ballard UG 17)

Unfortunately, film representations of future cities is not the main concern of this research. It leaves the question open to further investigation. Nevertheless, a brief overview of science fiction's treatment of the city in film is carried out in this Introduction. This overview should serve to further establish the relevance of the issue in science fiction, specially in relation to "Johnny Mnemonic", one of the three narratives analyzed in this study. Following cyberpunk's overt breakdown of distinctions (McCaffery 266) William Gibson's "Johnny Mnemonic" is treated as a "hybrid narrative" in this study as it is explained in Chapter III.

[6]Although a brief discussion of the term is presented in Chapter II of this study, for a fuller explanation, see Bukatman, TI 138.

[7]Another valuable work, which takes us on a different route, however, is Henry Lefebvre's *The Production of Space*. In this book, the French intellectual dwells on the concept of space as it ultimately relates and is used in western societies to represent position, negotiation and eventually be assigned as a mode of production.

[8]Article published in *Alien Zone*, a collection of essays on science fiction film edited by Annette Kuhn and previous to Bukatman's *Terminal Identity*.

[9]A detailed explanation of these terms will not be conducted in the dissertation itself. There are two reasons for this: not only are these terms used here merely as referential points to generally mark the work of the authors mentioned, but also because a full explanation of what is meant by these terms would takes us far too long into a characterization of them in relation to cities, their representations and meaning as urban space. In this sense we would only be repeating the author's words. For a full explanation of them, see the bibliography of the authors mentioned from where these terms have been taken.

[10]Maureen F.McHugh's first novel, *China Mountain Zhang*, published in 1992, follows the path already opened up by William Gibson. Like *Neuromancer* it also portrays human beings fully equipped to interact with the terminal spaces of cyberspace.

CHAPTER ONE

A LAST GLIMPSE INTO THE FABULOUS CITY OF MODERNISM AS IT CRUMBLES

'Oh, to-morrow--
some fool will start the Machine again, to-morrow.'
'Never,' said Kuno,'never. Humanity has learnt its lesson.'
As he spoke the whole city was broken like a honeycomb.
(E.M.Forster -- "The Machine Stops")

Although E.M. Forster's place in British modernism is not disputed, his role in science fiction (and thus his appearance here) is somewhat more difficult to grasp. The average contemporary reader of Forster might be puzzled for his inclusion, as he is best known for his acclaimed novels *A Passage to India*, *A Room with a View*, *Howard's End* or *Maurice*, novels in which the (British) past, not the future, is represented. As Mark Slouka has noted, Forster "was more typically interested in anatomizing the deficiencies of the English middle class than in predicting the future" (Slouka 81). Thus, for both the average reader of Forster and the science fiction aficionado, E.M.Forster figures here as a surprise.

A true anomaly of the science fiction genre -- Forster wrote, in 1909, this one piece of science fiction only -- more than eighty five years later "The Machine Stops" can still be considered a forerunner of science fiction texts. In spite of its much used (exhausted) "pastoral" conventions (mankind eventually

manages to escape "culture", turning its back to "civilization" and finding its way back to "nature")[1], in the development of its plot and selection of themes, Forster's only "meditation" on the future proves very elaborated (and coherent) for a number of reasons.

First, there is E.M.Forster's amazing concern for the human subject. Forster's modernist perception, that is, his keen mixture of irony and humanist values, even if rendered somewhat somber in the terms of a "retrofitted"[2] representation of the future, seems to dwell dangerously on the threshold of his manifest modernist beliefs and the current values of our own times.

Second, because of its many references to modernism's trust in technology, by means of its ultimate discoveries and developments -- pneumatic tubes, buttons of all kinds, "electric" bells, and Zeppelin-like air-ships -- "The Machine Stops" reads as an excellent site of the contemporary nostalgic imagination as its future seems curiously "modern". In this sense, it actually anticipates a vision of a future due to appear in full again only with postmodernism's multiple re-interpretations of the past.[3] For the contemporary reader then, this situation provides "The Machine Stops" with a site for an almost nostalgic relation between our immediate past and our present, and less, as Mark Slouka wants it to be, an apocalyptic warning of what might happen if the whole environment is connected, simulated in the bits, bytes and pixels of the Net.[4]

Apart from this obvious comparison, "The Machine Stops" clearly remains a modernist text. In Forster's elegant approach to doomsday, there is little room for postmodernism's deliberate

play with narrative conventions, facts and fiction, reality and representation. Clearly stated by the warning that Man,[5] not culture nor the machine (technology), should be the measure of all human action, much of the narrative's force lies on its heavily marked boundaries: its progressive disclosure of meaning founded on the differences between outside and inside, surface and depth, reality and its imitation.

How did the Machine actually come to a stop?

The plot of "The Machine Stops" can be summarized as follows. Humanity, living underground inside cells in the bowels of a powerful machine that spreads itself covering both hemispheres of the earth, is in complete isolation except for a network of communication systems. Controlled by this machine, humans live through the imitations presented by its dense system of communications. There is no need for movement and physical contact; together with the physical world, movement and physical contact have lost their meaning. Thus, humans dedicate their time to more enlightened activities: they lecture, discuss and meet through the machine. Vashti, one of these human beings who are cared for inside the machine, spends her time giving lectures and talking to her friends through the machine. Her son, Kuno, who lives in the Southern hemisphere, is a rebel determined to find out the real boundaries of their space, the event unmediated by the machine. He ascends to the outside just at the moment when the machine is giving its first signs of failure, the signs that it is about to break down, stop completely. Kuno comes back and urges his mother to see him in person to warn her. Although they

meet, she discredits his experience and leaves him to his own fate, unaware of her own tragedy.

Although -- in many aspects -- the obvious connection between Forster's machine and our present is that the machine resembles a magnified information highway (a.k.a Internet or its more advertised counterpart, the World Wide Web), my opinion is that, though one cannot deny the proximity between Forster's story and the virtual spaces created by computers nowadays, it is more adequate to think of "The Machine Stops" as an allegory of all abstract systems of representation (cultural or otherwise), artifacts by which and in which humanity moves. If technology or its products, as in Forster's view, can annihilate our sense of space, humanity by totally relying on its imitations rather than on physical realities is headed for disaster for forgetting, as we have seen, that Man, not the machine nor its products, should be the measure of all human dynamic, if not of human identity itself.

Thus, Forster's nightmare, by presenting a truly passionate defense of "real" space, that is, the reality of physical evidence as opposed to the abstract, virtual spaces created / imitated by the machine, becomes a text in which one can revisit a number of issues that would -- later -- seem to guide postmodernism's conceptions and strategies without ever compromising the story's modernist position. In this sense, let us examine some of these modernist positions in architecture.

Form vs. Function and otherwise

If the first impulses of a revolution in the fields of architecture and design given by the avant-garde movements remained largely in the realm of fantasy, the mid and early 20's were marked by a "real" revolution, especially in respect to the conventions and style that would be adopted by the period.

Having found a vehicle for their ideas in the avant-garde movements, visionary architects, such as Antonio Sant'Elia (see fig.4), who in 1914 wrote the important manifesto "The Futurist Architecture", set down the rules according to which a true reaction against all decorative styles that predominated in the nineteenth century could be carried on. Forwarded, in the United States, by the architects from the Chicago school[6] and, in Europe, by Walter Gropius (1883-1969) and the Bauhaus Art-school (1925-26, Dessau-Germany), the New Architecture was meant as a radical departure from the ideals of the past just as much as it represented a new kind of sensibility, born of mankind's newly found technological character. As a necessity to integrate man into this new environment and architecture to the demands of this new society, Modernist architecture made full use of the new materials and techniques to inscribe itself in the environment.

Ever since these first statements were made, architecture became identified with its functional use.[7] Stripped of any decorative accessories, all aesthetic judgments should be achieved through simple geometric forms strongly bound to their function. The functionality and adequacy of form, together with its economical and appropriate uses, was the motto proudly carried out by the architects of modernity against the

conservative, decorative architecture of the nineteenth and eighteenth centuries.

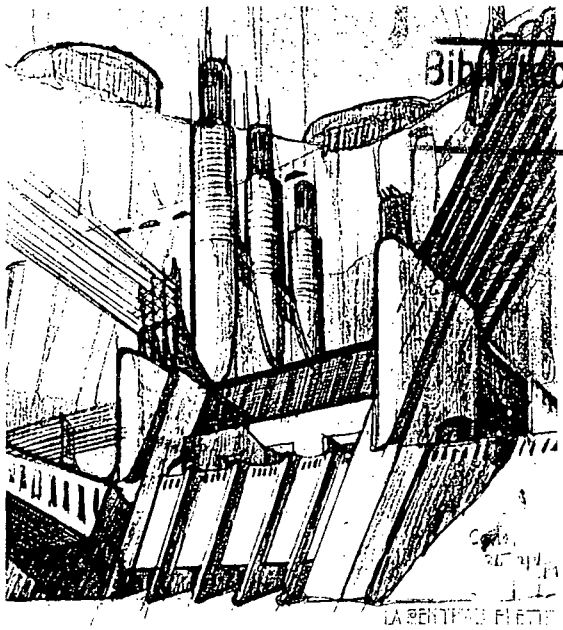

Fig.6. Antonio Sant'Elia, Centrale Eletrica. 1914. rpt. in Maurizio Calvesi, Der Futurismus: Kunst und Leben (Köln: Benedikt Taschen, 1987) 187.

In 1925, Le Corbusier suggested tearing down Paris and building it anew,[8] most exactly according to his own ideals, of which "The Plan Voisin", designed not only to replace the old Paris but also to herald a truly visionary (if not entirely "science fictional") architecture would solve most urban problems. Causing much sensation at the time, "The Plan Voisin" remains one of modernism's silliest examples of manipulation and grandeur in its declared rupture with the past (as well as in the utopian content of its models).

In "The Plan Voisin", skyscrapers, standing well apart from one another but connected by wide lanes and surrounded by trees, should accommodate -- in a compressed, vertically oriented area -- schools, shopping centers and leisure areas in an environment that was supposed to reproduce much of what a city had to offer: housing, entertainment, social space but in a much more condensed

and totally planned way (see fig.7) and without its problems. It would thus eradicate all marks of tension, the friction of the social fabric, directly in its structure. That the visions developed by architects such as Le Corbusier, and to a lesser extent Sant'Elia, should also become identified with some of science fiction's central images (that of the mammoth -- functional or dysfunctional -- city)[9] is no surprise: the well planned, "modern" city of the future was at that time no more than a fantasy (as it is in ours). More problematic is the understanding of the problems that -- as we know now -- these projects carried as some of them (either in their original form or in an abbreviated form) eventually came to reality.[10]

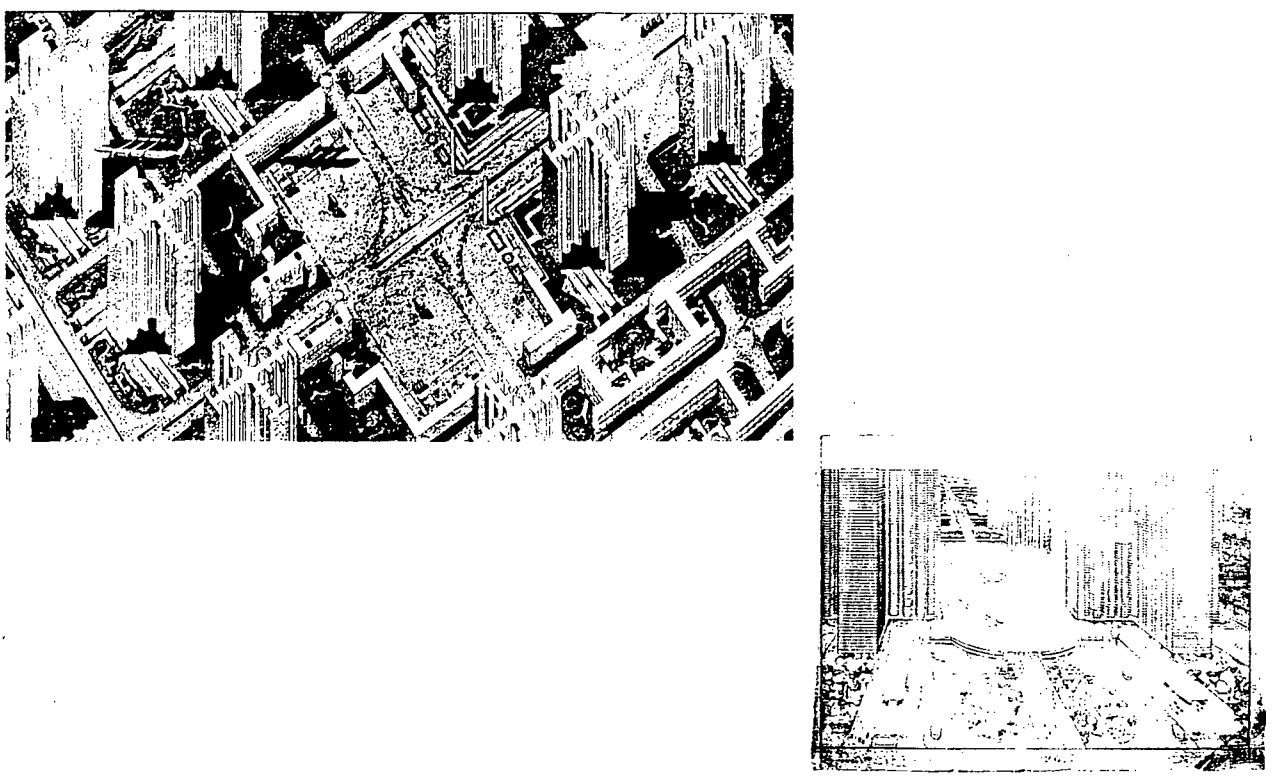

Fig.7. Le Corbusier, The Plan Voisin for Paris, 1925, two details. rpt. in R.Furneaux Jordan La Arquitectura Occidental (London, Thames and Hudson, 1969) 322. & rpt. in Brigitte Felderer, ed. Wunschmachine Welterfindung (Wien: Springer) 60.

BEE-CELLS, BE-HIVE, BE-HAVE.

An early reflection of these ideas and plans is apparent in Forster's "The Machine Stops". A natural form -- bee-cells -- inspires the design of the underground "city" of the story. Forster's appropriation of the housing solution of the bee-cells and his using them as human-cells or rooms clearly represents a translation to literature of the modernist ideals prevailing in the architecture and art of the period. A well known comparison between the building procedures of bees and those of an architect emphasizes the fact that an architect has an image of his building in mind by the time he begins his edifice, while bees can only follow a pattern of behavior (Pircher 93). However fairly simplistic, this observation still says much about the ideals and conceptions that the Moderns followed.

At the beginning of his story, Forster asks his readers to "Imagine, if you can, a small room, hexagonal in shape like the cell of a bee. It is lighted neither by window nor by lamp, yet it is filled with a soft light" (Forster 109). The sharp contours of Forster's irony works in two directions here. First he doubts the (modern) reader's capability to imagine anything: "Imagine -- if you can --", he writes. Then, in the design of the structure itself, he shows the other face of his irony. Dipped in evanescent light, the cells of the underground city are, in its structure, like those of a bee (Forster 109). While this representation clearly summarizes modernism's almost blind belief in the possibility of reaching perfection through a bond of form and function, a privilege of functionality and organization of

space through an appropriation (and forced improvement) of nature's designs, it can also be read as deeply ironic: why should such a (supposedly) advanced society continue to build bee-like cells for human beings to live in? Is it not reductionist and constrictive to merely follow the designs of nature? Is this not merely the disguised following of a pattern? Does the masking of nature inside technology not hint at humanity's own emptiness? If the bees build their houses according to certain rules, at least these rules are "imprinted" somewhere in their bodies, a bondage with the world, with identity which humans also lack.

A very similar notion can be found in many of the projects of the architects and designers of the time. That, which was also one of Bauhaus' chief concerns, seems to be one of Forster's focal points.

The modernist belief in the achievement of perfection through technological innovation is surely one of the strongest images to mark "The Machine Stops". Recurrent are the notions of human beings cared for inside the idealized spaces of the machine and much can be said about the underground city -- in fact an immense womb -- where humans merely press buttons to satisfy their needs. Fully protected and cared for by this ideal environment, humanity's trust in new technologies has lead them so far that -- even as the first clear signs of the failure of the systems begin to appear (no music, stinking bath water) -- the machine's acolytes, the believers, refuse to accept that something (in fact, everything) might be going wrong with the system in its entirety.

By removing humanity from the natural environment and placing it inside the (soon to be defective) structure of the machine, Forster's emphatic criticism actually has two points of attack. First, it turns against humanity's inability to deal with the physical environment, its reality and imperfections. Second, Forster sees the machine, as it represents the equation by which technology and culture become one and the same, as a product that yields for no originality of thought, but only mere reproductions. By doing that, Forster's humanity, in its ultimate denial of natural space in favor of an idealized abstract world of imitation (artificial, virtual space) inside the machine ultimately submits to an ironic sacrifice of all cultural production: since no event (no cultural product) can exist unmediated by the machine, culture ceases to exist altogether to take on another form: that of consumption.

Thus, even if the artifice of the quest for freedom of the lone-hero outside the machinal city still constitutes the bottom line of Forster's story, in the end, one is left with an altogether consistent image of a society that has been far too idle to acknowledge the risks of totally relying on technology. As the lone-hero "Kuno" learns, "Man -- meaning natural, physical space, and not the Machine, meaning artificial, virtual space -- is the measure" (Forster 125), but then it is far too late for the inhabitants of the underground city to turn back.

Reading Forster against its grain

Forster's story, however, proves much more interesting if read against its grain. If one resists its doomsday messages for

a while, the question "The Machine Stops" eventually addresses is one that stresses humanity's inability to relate to physical space (and its imperfections) centered around issues such as the privileging of the ideal over the real (Culture / Nature).

Shown in the story by humanity's imperative necessity of first destroying nature in order to assimilate, understand it, space becomes divided in two: 1-natural space: a space that can be measured in human values and has a physical reality; 2-artificial space: those spaces provided / created by the machine that equal and expand together with our will to reconstruct, conform and mold natural space along our own lines of thought, along abstractions of thought.

The underground city of "The Machine Stops", the cells, together with its inhabitants and its communication systems all belong to the first kind of space. They are the naked truths which are disguised by the machine as Kuno -- in his quest -- comes to know:

> There was a ladder, made of some primaeval metal. ... Perhaps our ancestors ran up and down it a dozen times daily, in their building. As I climbed, the rough edges cut through my gloves so that my hands bled. (Forster 127)

In the physical spaces "behind" the machine, one finds the real, "rough edges" of life, which are so carefully disguised by the machine: the ladder with its rough edges, the abandoned system of passageways and tunnels that were actually used to build the underground city of the machine are the ultimate truths of the working conditions whose evidence the machine aims at destroying with its imitations of life. What Kuno feels, what he ultimately

learns in there, triggered by his bleeding hands, is that the past (and the truth of his own condition) is still there, imprinted in the physical structure of the machine:

> I soon pushed some more tiles in, and clambered after them into the darkness, and the spirits of the dead comforted me. I don't know what I mean by that. I just say what I felt. I felt, for the first time, that a protest had been lodged against corruption, and that even as the dead were comforting me so I was comforting the unborn. I felt that humanity existed and that it existed without clothes. (Forster 127)

The second kind of space I have described is represented in the story mainly by humanity's consciousness afloat in the system of communications provided inside the machine and in the products forwarded by this technology, that is, by the experience mankind has access to through the machine:

> There were buttons and switches everywhere -- buttons to call for food, for music, for clothing. There was the hot-bath button, by pressure of which a basin of (imitation) marble rose out of the floor, filled to the brim with a warm deodorized liquid. There was the cold-bath button. There was the button that produced literature. And there were of course the buttons by which she [Vashti] communicated with her friends. The room, though it contained nothing, was in touch with all she cared for in the world. (Forster 113)

As the lines quoted indicate, imitation, not reality seems to be the motto of the machine: the bath is not water but a warm deodorized liquid, the basin not marble but imitation of,

literature (most probably) not textual but its imitation; called on by a "button", it might take any other form available. In this sense, Kuno's discovery, the story's own motto -- "Man is the measure" -- stands not for its face value, but for its assessment and denial of mankind's own identity. In Forster's meditation, by identifying too much with the machine's imitations of life (read technology), humanity is doomed. Without the constraints of physical space, the virtual, artificial spaces of the machine only deviate from reality into an imitation of life that eventually also comes to redefine what it means to be human.

This relation becomes even more explicit in the short story not only in the fact that people have given up the idea of public meetings (social interaction) in favor of long distance communications (lectures), but also in the way people, having lost their own identities inside the machine, seem to shrink, "shy away" from physical contact:

> People were almost exactly alike all over the world, but the attendant of the air-ship, perhaps owing to her exceptional duties, had grown a little out of the common. She had often to address passengers with direct speech, and this had given her a certain roughness and originality of manner. When Vashti swerved away from the sunbeams with a cry, she behaved barbarically -- she put out her hand to steady her. (Forster 120)

In the virtual spaces of the machine, physical contact is seen as barbarism, and imitation as culture. Human touch has lost its meaning with the loss of meaning of the physical world.

In Forster, one of the side effects of imitation is the effacing of difference. The machine, Forster tells us, does not

"transmit *nuances*[11] of expression" (Forster 111). What is at stake here is the loss of identity, evidenced by the fact that inside the machine everybody has come to look alike exactly because the machine does not transmit nuances of expression. More than anything else, Forster reproduces here one of modernism's primeval fears: that in the great metropolitan cities one was unable to locate oneself, identify oneself with the environment, thus loosing one's own identity in the labyrinth of the city.

At this point it becomes understandable why Forster has given the quest for fresh ideas in the story the touch of an almost cannibalistic ritual. In the arena of electronic communications and lectures (read it, e-mail, the Infobahn or the Net, if you want), it is bad taste for one body to share the same space as the other, but it is not wrong for people to feed on someone else's ideas:

> To most of these questions she [Vashti] replied with irritation -- a growing quality in that accelerated age. She said that the new food was horrible. That she could not visit the public nurseries through press of engagements. That she had no ideas of her own but had just been told one -- that four stars and three in the middle were like a man: she doubted there was much in it. (Forster 113)

In fact it is Vashti's own son who tells her that idea. Although she regards with contempt her son's adventure outside the machine, she cannot avoid being puzzled by this idea he had in the outside, though she doubts that there is any value in it. In an increasingly artificial environment there is little space for originality, people are increasingly unable to understand

metaphor. They only talk about what is granted (the food, the visit to the nurseries, Vasthi's lectures). Anything else, that is, anything that is outside the reality of the machine, that is not produced nor given by the machine, can not have any meaning. Meaning is thus circumscribed to what the machine gives you. At this point Forster's critique is quite clear: freedom (identified with the spaces outside the machine) is capable of producing meaning that is not understood by those inside the machine. If humanity is unable to see whatever lies beyond the meanings produced by the machine, moving inside the expected spaces available, then freedom and originality cease to exist altogether. And so does imagination. That ties neatly up with Forster doubting the "modern" reader's capacity to imagine things at the beginning of the story.

Much as physical contact -- perhaps a last remainder of the physicality of our own bodies -- is transformed in a sign of barbarism, another terrifying, threatening practice is to move by having ideas of our own, ideas that part from those provided by the machine. Such practice may represent a threat to the order of the machine, for ideas and the physical experience of space ouside its structure can subvert all of the machine's products and procedures.

To prevent that, the machine's answer is confinement to a cell: the annihilation of the sense of space. In the prison-like environment of the machine, freedom and liberty are illusory movements given / granted by the "good-enough" imitation it produces. And, as there can be no freedom of movement, no escaping the machine, only this "good enough" imitation which

eventually becomes commodified is life itself:

> And of course she had studied the civilization that had immediately preceded her own -- the civilization that had mistaken the functions of the system, and had used it for bringing people to things, instead of for bringing things to people. (Forster 115)

In this sense, by an inversion of values, humanity becomes its own prisoner and life itself a commodity. Space (or its opposite, confinement) has become the ultimate frontier for the totalitarian state: "Men seldom moved their bodies; all unrest was concentrated in the soul" (Forster 117) and the consequences, for Forster, are tragic.

At the very beginning of the story, when Kuno -- Vashti's son -- first calls his mother, we are informed that she is deeply disturbed by his call not only because she is busy preparing to deliver a lecture on "Music on the Australian Period" (Forster 109) but mainly because of his wish to see her in person:

> 'What is it, dearest boy? Be quick. Why could you not send it by pneumatic post?'
>
> 'Because I prefer saying such a thing. I want -- '
>
> 'Well?'
>
> 'I want you to come and see me.'
>
> Vashti watched his face in the blue plate.
>
> 'But I can see you!' she exclaimed. 'What more do you want?' (Forster 110)

Kuno's mother has long accepted something good enough. She learned to live in complete isolation, seeing now no difference between the imitation and the objects themselves, between the original and the reproduction. She eventually prefers the

imitation as well. In this sense it is not only the physical space of human intercourse that has disappeared. The human body (quite literally) has vanished inside the bowels of the machine and with it all capacity for love. The space of feeling has totally lost its meaning for her. Kuno's mother has no use for that. Another of Forster's twist in the story is his view of a humanity only concerned with having ideas, thinking / lecturing about things.

But, given the force of reproduction and imitation, natural space has been completely assimilated (and depleted of its interest) by artificial space: "I dislike the horrible brown earth," -- says Kuno's mother at one point in the story, "and the sea, and the stars when it is dark. I get no ideas in an air-ship" (Forster 111). At this point, regardless of whether Forster's intention was to attack the Modernist privileging of the mind above anything else, it is impossible not to sympathize with Forster's doomed humanity. No matter what has happened to earth, whether it has been battered or whether it continues to be as it has always been, no ideas can be gathered from seeing, observing life. In a shameful, almost cannibalistic inversion of values, cultural forms cease to inform and represent nature, they take on to feed upon themselves.

Un-movable, perfectly still, but connected to thousands of other human beings, Forster's humanity awaits its doomsday peacefully "hummed" to sleep. Surrounded by the sounds, products and culture of the machine, it ceases to be human altogether. At this point sympathy is not enough; it becomes impossible not to identify with Forster's humanity as it eventually so perfectly mirrors our own. Forster's ironic, but passionate defense of

human values against a total consumer's society -- as the machine finally stops -- is powerful enough never to be forgotten:

> 'Of course', said a famous lecturer -- he of the French Revolution, who gilded each new decay with splendor -- 'of course we shall not press our complaints now. The Mending Apparatus has treated us so well in the past that we all sympathize with it, and will wait patiently for its recovery. In its own good time it will resume its duties. Meanwhile let us do without our beds, our tabloids, our little wants. Such, I feel sure, would be the wish of the Machine.' (Forster 141-42)

If "The Mending Apparatus" responsible for the maintenance of the machine, the mediator of the physical and the virtual realities of the machine, has broken itself down, then our little wants (housing, food, education) must be forgotten in favor of a larger "truth", that of the Machine itself. At a time when the control and production of all space (cultural or otherwise) has been taken over by the Machine, there can be no "humanity" without the machine; thus, there is nothing to be done but patiently wait.

In the same way that capitalism takes over the last empty spaces of the world (think of the empty spaces recently created by the fall of The Berlin Wall, communism in China or socialism in the former Soviet Republics), in "The Machine Stops" it is the Machine that has taken over the control of the world. No matter how clear the signs of the disease are, no one believes in the possibility of its total failure:

> Now the door of the cell worked on a single hinge of its own. It was not connected with the central power station, dying far away in France. It opened, rousing

> immoderate hopes in Vashti, for she thought that the Machine had been mended. It opened and she saw the dim tunnel that curved far away towards freedom. One look, and then she shrank back. For the tunnel was full of people -- she was almost the last in that city to have taken alarm. (Forster 143)

If Forster's image of the interconnected power stations of the Machine, now dying away in France, or elsewhere, resemble the frantic images drawn by the dada and surrealist movements in the early 20's to represent fascism and capitalism, it is not by chance. In many of the representations forwarded by dada, all forms of authoritative power (nazism and fascism, but especially capitalism) are portrayed as tentacles sucking on a bleeding world. As a clear site of modernism's concerns, Kuno's quest for the spaces outside the machine is also emblematic of modernism's early revolutionary movements. One had to fight not to be assimilated, to get outside the machine that is responsible for the production of cultural spaces.

NOTES:

[1]See what Malcolm Bradbury, in "The Cities of Modernism" (p.97), has to say about the theme: "Writers and intellectuals have long abhorred the city: the dream of escape from its vice, its immediacy, its sprawl, its pace, its very model of man has been the basis of a profound cultural dissent, evident in that most enduring of literary modes, pastoral, which can be a critique of the city or a simple transcendence of it." In science fiction, especially, the theme seems to have found its momentum. See, for instance, Arthur C.Clarke's novel "The City and the Stars" in which the last two civilizations on earth have taken up different roads to development. One forwards a complete technological cultural environment, which replaces reality for its own simulation. The other, reproduces a pre-industrial environment with emphasis on nature and community.

[2]This term, used by Scott Bukatman in *Terminal Identity*, describes and characterizes the future presented by Ridley Scott's Blade Runner:

> it is a future built upon the detritus of a retrofitted past (our present) in which the city exists as a spectacular site; a future in which the nostalgia for a simulacrum of history in the forms of the *film noir* (narrationally) and forties fashion (diegetically) dominates; a future when the only visible monument is a corporate headquarters. Most urgently, it is a future in which subjectivity and emotional affect are the signs of the nonhuman. (Bukatman TI 130-131)

It is my opinion that, preserved the obvious differences in narrative conventions of each story, this term can be applied with interesting results to describe the future presented in "The Machine Stops".

[3]There are --usually-- three main accepted reasons for this: first, because of the postmodernism's characteristic abolition of tradition, second for its loss of temporality (a privilege of space over time) and finally for its almost schizoid nostalgia for reconstructing the past (a referent forever lost). Terry Gilliam's Brazil (1985) pictures a fine instance of these three elements. Gilliam's future draws its inspiration -- is retroffited -- in the 40's and 50's style; its characters are clearly schizoid subjects and the abolition of history in the bowels of The Information Retrieval Bureau reaches even further than in Orwell's 1984.

[4]Mark Slouka, in his book War of the Worlds, has successfully inscribed and identified -- although in his rather doomed perspective -- the "self-enclosed universe" of "The Machine Stops" with the virtual environment of cyberspace:

> Faced with Forster's Dantesque vision, I find myself wanting to qualify, to distance myself from a parallel that seems at once too obvious and too reductive.... Seventy years ago, Forster placed his heroine at the center of a human hive. Today, the technologists use that very metaphor to describe the interlinked hive nature of the Net." (84)

[5]Please, let us not forget that Forster wrote this story much before the contemporary feminist movement had set its roots in fiction.

[6]Among which are William Le Baron Jenney, William Holabird, Martin Roche, Daniel Burham, John Wellborn Root, Dankmar Adler and Louis Sullivan. (Cited by R.Furneaux Jordan, see bibliography).

[7]Perhaps this is true of architecture in all times, as William J.Mitchell notes: "Buildings were distinguished from one another by their differing uses, and the inventory of those uses represented social division and structure. The Roman theorist Vitruvius recognized this when he enunciated the principle of architectural decorum -- appropriateness of form to purpose and status" (Mitchell 47-48). In this sense Walter Gropius and the Bauhaus Art School only represent a translation of these ideals into modern times.

[8]Robert Venturi and his associates mention, in their famous book, *Learning from Las Vegas*, that, "learning from the existing landscape is a way of being revolutionary for an architect. Not the obvious way, which is to tear down Paris and begin again, as Le Corbusier suggested in the 1920's, but another, more tolerant way; that is, to question how we look at things" (Venturi 3).

[9]See Ridley Scott's famous design of the Tyrrell building in Blade Runner and compare it with one of Sant'Elia's drawings.

[10]It is not our concern here to discuss architecture in itself nor its solutions but to work from their representation in science fiction. Thus, a critique of those plans (found in almost any book on architecture) will not be carried out here. It suffices to say that criticism against mega-projects such as those of The Plan Voisin is abundant.

[11]Italics in the original.

CHAPTER TWO

J.G.BALLARD, LSD, GLASS REPLICAS

OR

THE END OF THE WORLD AS WE USED TO KNOW IT

It is the fantasy of seizing reality live
that continues -- ever since Narcissus bent over his spring.
Surprising the real in order to immobilize it,
suspending the real in the expiration
of its double. (Baudrillard)

As an emerging movement, Modernist architecture (before it was even called so) finds perhaps no better representative metaphor than the iron and glass structures extensively used by Joseph Paxton (1803-1865) in the Crystal Palace, erected for the first World Exhibition in London's Hyde Park (Sorkin 208). At the time, 1851, the design of Paxton's Crystal Palace and the technology that would enable its construction in six months served finally to an end to the ongoing discussions and critiques that the use of new techniques and new materials incited in architecture. Marking a definitive rupture with the ideals of the previous age, of which ornamental profusion and decorative elements were trademarks, Paxton's Crystal Palace stood as a monument of the new times to come.

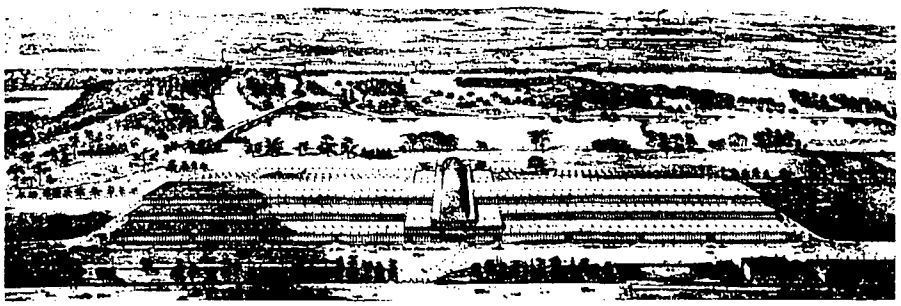

Fig.8. Aerial view of the Crystal Palace, London, Hyde Park, 1851. rpt. in Brigitte Felderer, ed. Wunschmachine Welterfindung (Wien: Springer) 321. The Crystal Palace was 563 mt.long, 124 mt. wide and 33 mt. high. Today there's an archaeological society that takes care of the remnants of the building.

It comes as no surprise, thus, that only a few years later, glass and iron -- but specially glass -- (together with concrete, one the new materials designed to be used with them) should be regarded as the hallmarks of a totally new technology for the architecture[1] of the period. This technology, together with the sensibility it forwarded (much identified with the avant-garde movements in the arts), would soon be named Modernist architecture.[2]

Less obvious, however, is the fact that -- some fifty years later -- the same metaphor would also be used (this time in literature) as a vehicle to definitely mark the emergence of yet another period, another sensibility: this is exactly what happens in J.G.Ballard's short science fiction "The Illuminated Man".

At the same time that they mark the end of Modernism's ideals, glass structures (or their equivalent, glass-like sheaths) become identified -- in Ballard's story -- with the emergence of a new sensibility. Grounded -- as Bukatman believes -- on the experience with hallucinogens and much fascinated "with the psychedelic modality" (Bukatman, Terminal Identity 139), the psychedelic stories of Ballard foreshadow (in science fiction) the doubts and worries of different times, namely, those of Postmodernism.

Thus, just as much as Paxton's Crystal Palace can be representative of the emergent ideologies that would predominate some years later in the architecture of the period called High Modernism, perhaps there can be no better representative of the emergent doubts of yet another era (our so-called postmodern times) in science fiction literature than the "crystalline mutations of Ballard's environment" (Bukatman, Terminal Identity 139), found -- for example -- in his short story "The Illuminated Man".

WHAT IS THE SCIENCE FICTION NEW WAVE?

J.G.Ballard, one of the best known British New Wave science fiction writers, published "The Illuminated Man" in the early 60's.[3] The New Wave -- explains Bukatman -- belongs to a tradition in science fiction writing that has its origins in the sociological science fiction of the 50's, of which Theodore Sturgeon[4] is one of the best known authors.

Based on a number of critics, Bukatman mentions two distinguishing traits of New Wave science fiction. First, that it responded to an "awareness of contemporary literary production originating outside the genre" by writers (such as Burroughs, Barth, Pynchon and Vonnegut Jr.) who have "used the languages of technology and science fiction in highly reflexive and self-conscious reformulations" (Bukatman, Terminal Identity 138) to reflect changes in the mood of the period, and second, that it "allegorized the exhaustion of the real" (Bukatman, Terminal Identity 138).

Now, if the first characteristic trait of science fiction's New Wave mentioned by Bukatman does not sound so obscure as to call for a detailed explanation of its terms, the second cannot be mentioned without an investigation of what Bukatman calls 'the exhaustion of the real'. As science fiction's utopian / dystopian dialectic collapsed, writes Bukatman,

> New Wave [science fiction] allegorized the exhaustion of 'the real' -- as represented by the dichotomous terms of redemption or damnation -- through a baroque and over-elaborate writing that emphasized a pure materiality. (Terminal Identity 138)

Such writing of "pure materiality" -- one of Ballard's most distinguishing characteristics -- continues Bukatman, quoting Fred Pfeil -- the critic and sometime science fiction writer,

> accounts for 'the otherwise inexplicable, hothouse florescence and sudden significance of that whole host of autotelic language practices, experimental forms, and, strictly speaking, inadequately motivated but luxuriant image play which is the SF New Wave." (Pfeil

qtd. in Bukatman, Terminal Identity 138)

Bukatman continues quoting Pfeil to re-affirm his words that the "New Wave" science fiction represents "a moment of Modernist compromise". Hence, a period in which science fiction, "caught as it was between an outmoded set of [Modern] narrative strategies and thematics 'and a new' which could not yet be born"[5] (Pfeil qtd. in Bukatman, Terminal Identity 139), boasted -- he explains -- through its set of "baroque and over-elaborate [experimental] writing" a tentative "exhaustion of the real" (Terminal Identity 138), its escape from the dichotomous terms of redemption and damnation, its escape from a pattern that, because it repeats itself, becomes a mere common-place, a cliché, disguising its own structure and becoming irrelevant as a language that reveal "reality".

One of the ways to understand Bukatman's baroque 'exhaustion of the real' in New Wave science fiction, thus, is to acknowledge that the New Wave actually represents a turning point in science fiction writing. That is, in the same way that the baroque style[6] in architecture is characterized by ornamental profusion, producing a sort of over-elaborate, fully theatrical architecture before a return to classicism was possible, when the Modernist tradition collapsed, i.e., exhausted its own conventions, it was confronted with another set of rules. By means of its over elaborate language strategies and image play (its baroque profusion of details) that emphasize the materiality, the surface structure of its objects rather than their depth, their "inner life", the New Wave begins thus a movement towards the emergent terminal spaces of postmodernism, towards what Bukatman comes to call terminal identity.[7] This set of new rules with which the

Modernist tradition in science fiction was confronted was the New Wave of the 60's.

BALLARD, AS OPPOSED TO DEBORD AND BAUDRILLARD

It is perhaps fair enough to say that "The Illuminated Man" is more complex than my reading of the story, not at plot level, as expected, but on the subliminal level of its imagery. In order to produce a fairly concise interpretation of the story, I had no choice but to leave out many (perhaps equally important) elements that figure in the story.[8] If read in accordance with at least two critical theories of the period in which it was written, "The Illuminated Man" can produce a rich sample of Modernist and Postmodernist strategies at the core of its many images. Since a very elaborate sequence of events is missing from the story, it seems that Ballard saw fit to articulate the story from another point of view. In this sense, following Bukatman's definition of the New Wave (of which it is undoubtedly part), "The Illuminated Man" actually performs the exhaustion of the real by means of a metamorphosis of the entire environment into an allegory of crystal-clear, pure materiality, grounded perhaps -- as Bukatman says -- on the psychedelic modality; besides this, the story can also be read as an elaborate translation of postmodernism's emerging sensibility.

The plot of "The Illuminated Man" can be summarized as follows: A group of scientists and attachès is invited to the Everglades of Miami, Florida to witness and analyze a strange phenomenon that has been covering all matter -- forest and city

alike -- with a glass-like substance. As they get there one of the scientists gets lost in the "cristallized" area, meets other strange characters and has to run for his life.

Together with Baudrillard's *Simulacra and Simulation* (1981), and with Debord's theses in *The Society of the Spectacle* (1967), the story of "The Illuminated Man" represents, I believe, a site of instability between Modernist ideals and Postmodernist anguish.[9]

Although the actual exhaustion of the real (its vanishing[10] into another realm), as proposed by Debord or Baudrillard, can be easily fitted into Ballard's allegory of the "Hubble Effect" (as an "inexplicable" process that affects matter and space equally, this phenomenon provides not only for a great spectacle but for its own simulations as well), my idea here is less to test the validity of Debord's and Baudrillard's theories than to read the story within the context of Postmodernism provided by these two theories.

"Oh, Miami...you city of a thousand cathedrals to the rainbow sun."

As "The Illuminated Man" begins, three spots, or, in Ballard's terms, "focal areas" on earth (in Florida, Byelorussia and Madagascar) have already been transformed / metamorphosed by "The Hubble Effect". Since two of the spots affected by the phenomenon are unavailable for inspection (in Byelorussia the government does not allow for any foreigners to inspect the place[11] and in Madagascar the "focal area" is totally inaccessible), the story takes place in a welcoming USA.

Unless one seriously accepts, in the guise of a "scientific" explanation for the phenomenon, the (not less scientific) approach provided by science fiction's codes, The Hubble Effect, as a process, remains as mysterious as the causes that trigger its manifestation and its "meaning" for the story. The following argument is forwarded by Ballard's narrator:

> "The Hubble effect is much closer to a cancer as far as we can see -- and about as curable -- a proliferation of the sub-atomic identity of all matter. It's almost as if a sequence of displaced but identical images were being produced by refraction through a prism, but with the element of time replacing the role of light. As it transpired, these were prophetic words." (Ballard 81)

Prophetic or not, in Ballard the codes and assumptions of science fiction are literally pushed to their limits: this explanation of the phenomenon shows, for instance, that even as it respects the conventions of the genre, the New Wave was more committed to creating an experimental field for the transformation of science fiction (perhaps to mirror its awareness of the language of contemporary literature and the problems of narration) than to reproducing the (now exhausted) standards of its Modernist counterpart. Hence New Wave's apparent fascination with the psychedelic modality (as Bukatman calls it) and its consequent resorting to images in order to produce meaning. And hence the narrator's assuring his reader, at the beginning of "The Illuminated Man", that although "there have been so many conflicting reports from the three focal areas", the following account (that is, the story itself) "is entirely based upon first-hand experience" (Ballard 75). So much for modernist irony

for, as the story develops, it becomes clear that "first-hand experiences" can never be made so simple anymore.

Now, if as we are told the Hubble Effect, as it replaces "light" with "time", is responsible for generating displays of identical (but displaced) images of whatever lies in its way, "a proliferation of the sub-atomic identity of all matter", equally affecting the natural environment (forests, everglades, animals, the cities and the objects surrounding mankind), then space and its continued disappearance through time, becomes one of the subjects of Ballard's short story. In this sense then, Ballard's short science fiction stands for a first site in which the real world (physical reality / space) is threatened (in astounding proximity with the writings of Debord and Baudrillard) by nothing less than its own simulations. (Which amounts to the prophetic side of the story.)

Two approaches can be taken in order to review Ballard's story. In the first, one has to remember Bukatman's words in relation to Ballard as a writer. In spite of leaving Ballard's much explicit use (in many of his writings) of war-related metaphors entirely unmentioned,[12] Bukatman is right in talking about Ballard's fascination with the psychedelic modality. Either, on the one hand, The Hubble Effect of "The Illuminated Man" is but a vision grounded on psychedelic perception (not that much different from those which inspired LSD guru Timothy Leary in his hallucinogenic trips and "philosophy"), or it stands for both, that is, its subject and thematic, although remaining

grounded on the psychedelic modality, also stand for something else.

In the second approach, such psychedelic inspiration loses power, serving merely to give the story its necessary background. Consequently, one can read "The Illuminated Man" today -- and without pushing it to its limits -- as one of the first narratives to problematize the issues forwarded by Guy Debord's *Society of the Spectacle* directly in its core.

The Hubble Effect as Spectacle

If this second approach seems rather exaggerated, one should remember people's reactions to what gets the media coverage in "The Illuminated Man":

> I see a report in today's *New York Times* that the whole of the Florida peninsula, with exception of a single highway to Tampa, has been closed and that to date some three million of the state's inhabitants have been resettled in other parts of the United States. But apart from the estimated losses in real estate values and hotel revenues ('Oh, Miami', I cannot help saying to myself, 'you city of a thousand cathedrals to the rainbow sun') the news of this extraordinary migration seems to have prompted little comment. (Ballard 76)

Whether it is -- as Ballard's narrator proposes -- because of our optimism that this extraordinary migration prompts little comment, or because of mankind's Darwinian convictions in the survival of the fittest (our scientific counterpart for the idea of eternity), the losses in real estate seem to be the only

important issue worth making the headlines regarding the Hubble Effect.

As the Hubble Effect re-organizes society (resettling and moving people around), it equals and becomes identified with Debord's idea of "the abstract space of the market" (Debord 120) as it shatters and annihilates all (regional or otherwise) barriers with one single stroke. In becoming its literary equivalent, the Hubble Effect as a science fiction allegory, however, leaves space for a difference: in Debord, since "we already live in the era of the self-destruction of the urban environment" (Debord 123) because capital and consumption dictate the organization of society, there is very little or no need at all for any allegory of this kind. It is merely "the technical organization of consumption [that] is thus ... the herald of that general process of dissolution which brings the city to the point where it consumes itself" (Debord 124). In Ballard, however, it is precisely the allegory, the Hubble Effect, that produces the effect.

At a further stage in the story, this identification becomes even clearer. The answer to why the Hubble Effect is so powerful and why everything else prompts so little comment in Ballard's world becomes one that only Debord can answer. Underneath this apathy is the fact that the society portrayed by Ballard has already moved -- as Bukatman explains -- "into a new mode of phenomenological and commercial existence" (Bukatman, Who Programms You? 197). Thus, according to Debord, Ballard's society is one in which "modern conditions of production prevail" and because of that "The whole of life ... presents itself as an immense accumulation of *spectacles.* All that was once directly

lived has become mere representation" (Debord 12). Hence the cristallization of the environment in "The Illuminated Man" into one all-encompassing spectacle of colored glass-like replicas. And so, the further implications of the spectacle (as proposed by Edward Ball[13]) can also become the implications of the Hubble Effect of Ballard's story:

> For some reason I suddenly felt less concerned to find a so-called 'scientific' explanation for the strange phenomenon we had seen. The beauty of the spectacle had stirred my memory, and a thousand images of childhood, forgotten for nearly forty years, now filled my mind, recalling the paradisal world of one's earliest years when everything seems illuminated by that prismatic light described so exactly by Wordsworth in his recollections of childhood. (Ballard 82)

As Ballard's character, so amazed by the spectacle of the environment turning into "coloured glass", forgets even his task as a scientific observer to dive into his own memories, he transforms these memories into a safer, better place than the one he is in now. In this sense, his own memory, the product of an already atomized past, becomes a golden age that cannot be touched or invaded by the present's simulations of time created, allegorized in the story by The Hubble Effect. The only history, as we will see, he has access to now are those "prismatic light" recollections provided by someone else, or someone else's narrative. Direct experience vanishes, moves into representation.

The childhood Ballard's character dreams of is of the kind described by Wordsworth. In the poetic descriptions of Wordworth's childhood, the character of "The Illuminated Man"

mirrors his own childhood, his own history. In this sense, he becomes prey to simulation, a subject completely at a loss with his own present, his own referent. That is a tricky, dangerous procedure: as his own world, his space and ultimately the character's memory can become the prey, being invaded by simulations of reality, history is also at stake. Not only by the time that the character was living his own childhood, had Wordsworth's England already long disappeared under the pressure of the industrial revolution, but also that particular kind of experience (the textual kind, of which Wordsworth poems are nevertheless part) cannot be passed onto anyone as a first hand experience, without mediation.

Caught in the game, what we are left with here is a double-play on memory, reality and its disappearance under the layers of simulation. On the one hand, we see the character's memories, as the only traces of history left, slowly disappear (once more) under the layers of the constructed nostalgia of a magic, untouchable past which -- much like what's happening with the 'real world' -- because the outside world is disappearing, can only be "crystal-like" reproduced by a simulation accessed in his memory, only "textually", not physically. On the other, we have the spectacle itself:

> Everyone in our craft was gaping at this spectacle, the vivid crystal light dappling our faces and clothes, and even my bearded companion was moved by astonishment. (Ballard 81)

It is not by chance that Ballard's character is nostalgic about his childhood, or that it is the spectacle that stirs in his memory "that prismatic light described so exactly by

Wordsworth." More than any logical explanation of the event, in an anticipation of postmodernism's nostalgia and loss of the referent, its fascination with the sign, Ballard's character (a scientist) is simply "paralyzed" (frozen, cristallized) by the "beauty of the spectacle". Equally paralyzed, we can most certainly assume, will be the rest of humankind because, as Bukatman explains:

> The spectacle controls by atomizing the population and reducing their capacity to function as an aggregate force, but also by displaying a surfeit of spectacular goods and lifestyles among which the viewer may electronically wander and experience a simulation of satisfaction. (Bukatman Who Programms You? 197)

The degree to which this observation extends to Ballard's text is Debord who explains, this time by placing the city in the originating center of history: "The city is the locus of history because it embodies at once a concentration of social power, which is what makes the historical enterprise possible, and a consciousness of the past" (Debord 125) in its streets and buildings. If that much is granted, or, in the case of Ballard, taken away, what is left is the spectacle of space and history (the consciousness of the past) being annihilated as cities become "unavailable", except in their "spectacular" forms:

> With a simultaneous gasp of surprise we all craned forward, staring at the line of jungle facing the white-framed buildings of the town. Instantly I realized that the descriptions of the forest 'crystallizing' and 'turning' into 'coloured glass' were exactly truthful ... so that the whole scene

> seemed to be reproduced by an over-active technicolor process. (Ballard 81)

If -- during the early 70's -- Ballard's endless, crystal-like reproductions in over-active technicolor process still mirror the originals they reproduce and his concern with the past has not achieved the dark sub-tones it has for all of us nowadays, it is because of two things. First, his images have been too strongly linked to the psychedelic mood of the decade. Second, his characters, however "lost in space", are still able to cling to some sort of personal master-narrative which gives them identity.

Nowadays, Ballard's New Wave science fiction can well stand for an early representation of a post modernist ideology in which all conviction that meaning and truth might be found somewhere has been taken away, unless one complicates things a little: Ballard's characters (not so unlike Forster's), however lost in a world of spectacular simulations, turn to a master narrative to give their lives some meaning. Here lies the crucial move that distinguishes Ballard's times from Forster's: Ballard's characters and their history, however 'obsolete' in the face of the spectacle taking place in front of them, hold on to the past in order to escape the present. Whether they are to liberate themselves from the simulations, just as Forster's characters liberate themselves from the imitations of the machine and survive at the end of "The Machine Stops", is still a question that remains to be answered.

Thus, it is the continual transformation of living space into a no-man's zone of crystallizing simulation that seems to add interest to "The Illuminated Man". There lies the fact that it presents a clear anticipation of postmodernism's concern with

the uses of representation as "[it] begins to have less to do with the world 'out there' than with the physiological conditions of vision, conditions that can now be simulated"[14] (Bukatman TAI 258).

Therefore, it can be argued that Ballard's story illustrates the transition between a purely modernist and a post modernist approach. The subject, in this fine mixture of beliefs from both periods, is one that still believes in salvation from the spectacle. By -- quite literally -- creating a future in which not only certain spaces have been made totally unavailable, inaccessible (people have been removed from the affected areas), but also by representing a space that has been invaded by a simulation of itself, replicas of things that were before, Ballard produces a curious narrative mix of modernism and post modernism:

> Examining the specimens collected on the tables, I touched the smooth glass-like material that sheathed the leaves and branches, following the contours of the original like a displaced image in a defective mirror. (Ballard 85)

In its most striking feature, nature is assimilated by its own representation. Embedded in a most peculiar pastiche of glass (the modernist material par excellence), all the matter and space of "The Illuminated Man" becomes a simulation, a double and a replica of itself that cannot be reached nor experienced by the traditional means because it has been reproduced not by a perfect mirror but by a defective one. By composing a panorama of the transition from a purely modernist perception of space to a hybrid of modernist and the first contours of postmodernism,

Ballard's story should be placed among the many texts that help foreshadow a crisis and a change in our perceptions of the world. In this sense, Ballard is perhaps so much on the verge of a new perception, that his allegories in "The Illuminated Man" can and perhaps must be seen as representative of early postmodernist science fiction.

The Hubble Effect as Simulacra

Now, more as a series of tentative answers to what I have posed before, I turn to Baudrillard. It is not by chance that Jean Baudrillard begins *Simulacra and Simulation* with the following (at first sight, enigmatic) remark from Ecclesiastes:

> The simulacrum is never what hides the truth -- it is truth that hides the fact that there is none. The simulacrum is true. (1)

And it is also not by chance that in Ballard's story the physical world has begun to disappear, threatened by the layers of simulated patterns of its own real physicality. In both texts (Ballard's and Baudrillard's) one can witness the slow 'disappearance of the real' and thus the slow disappearance of truth, as it becomes absorbed by its own simulations which leave (as in Ecclesiastes) no sign of its existence behind.

In Ballard's story, truth is problematized in a way that was not possible, say, in Forster's time. Truth and, therefore, meaning are still possible (perhaps one should say desirable) for Forster because it is still possible to go back to the moment in which you grasp the determinateness of your physical existence, something that happens outside the simulated structures of the

machine. That is, the moment you realize the physicality of your (and of your ancestors') own experience, memory and history begin again and become once more liberating, available to scrutiny through the leaks of the machine. To escape simulation is to make narration (or emplotment) still possible.

Now, truth in Ballard becomes little less than impossible because the simulations that start to cover up the entire physical world of "The Illuminated Man" turn narration itself (as Baudrillard proposes[15]) into an impossibility:

> By crossing into a space whose curvature is no longer that of the real, nor that of truth, the era of simulation is inaugurated by a liquidation of all referentials -- worse: with their artificial resurrection in the systems of signs, a material more malleable than meaning, in that it lends itself to all systems of equivalences, to all binary oppositions, to all combinatory algebra. It is no longer a question of imitation, nor duplication, nor even of parody. It is a question of substituting the signs of the real for the real, that is to say of an operational double, a programmatic, metastable, perfectly descriptive machine that offers all the signs of the real and short-circuits all its vicissitudes. (Baudrillard, Simulation and Simulacra 2)

Baudrillard's thesis and the description of the phenomenon in "The Illuminated Man" can be astoundingly similar. There is a difference, however: while Baudrillard is granted his status as a philosopher, Ballard is given the role (as Bruce Sterling has suggested) of the court jester, the status of all science fiction

writers. After examining some of the specimens affected, the scientists of "The Illuminated Man" gather that

> [w]hen the centrifuge stopped we peered into the bowl, where a handful of limp branches, their bleached leaves clinging damply to the metal bottom, lay stripped of their glacé sheaths. Below the bowl, however, the liquor receptacle remained dry and empty. (Ballard 86)

This is a crucial moment. The substitution -- as Baudrillard prescribes it -- is not only complete in the world of "The Illuminated Man"; it is also -- as Ballard envisions it -- prophetic. What should have remained to be collected in the bowl -- the simulacra, that what (supposedly) hides the truth -- has disappeared, vanished, leaving no trace: the receptacle remains dry and empty. However, the leaves and branches have been stripped of their glacé sheaths. Where the glacé sheaths of simulacra should have been collected, there is nothing. Where the real, stripped of its simulacra should have been, there are now the bleached leaves and limp branches. Destroyed by the scientists' examination in the centrifuge, these limp branches and bleached leaves cannot be taken as the sign of the real anymore, they become its "resurrected" substitution. Thus, as Baudrillard proposes, there is no sign of the real anymore, the simulation comes first, even before the real, and it was not the simulacrum that has hidden this truth. In this sense, it is the real and not the simulation that has been destroyed, stripped off its layers of meaning. This is the point where Ecclesiastes, Baudrillard and Ballard (their languages) come together:

> Hallucination of the real, of lived experience, of the quotidian, but reconstituted, sometimes down to

> disquietingly strange details, reconstituted as an animal or vegetal reserve, brought to light with a transparent precision, but without substance, derealized in advance, hyperrealized. (Baudrillard, Simulation and Simulacra 124)

Remembering "The Machine Stops", the one element that helps Forster's hero -- Kuno -- to grasp the truth of his own condition begins to disappear from Ballard's world: physical reality, the possibility of retreating to its truth. The ladder that cuts Kuno's hands as he climbs back to the surface of the earth, and that somehow triggers in his memory the ancestral voices that comfort him through his journey, is representative of that space.

In Ballard, however, it is not that physical reality has actually disappeared from sight (the world, the forest, the city of Miami are still there); they have only been buried under layers and more layers of replicas. Our perception of them -- however -- has been deeply transformed by the coloured distortions of their spectacular simulation. Though reality is still there, it is not available anymore. It has been enveloped by simulation, moved into representation, not as a whole as in Forster's modernist phantasy of the machine, but down to its smallest portions and details.

If escape is still made possible in Forster's world, it is because Kuno -- learning about his own condition -- frees himself from the constrictive environment of the machine, from the imitations of the machine which encompass the environment as a whole, finding its limits and stepping outside its domain. That same relation figures in (and can be best exemplified by) Paxton's Crystal Palace. As Susan Buck-Morss has noted[16], although

it "blend[s] together old nature and new nature -- palms as well as pumps and pistons" in its architecture of glass and iron, it does not prevent our contact with the real world as the glass sheaths enveloping every portion of Ballard's environment in "The Illuminated Man" do: as a unified structure, Paxton's Crystal Palace covers and envelopes everything inside itself, like the master-narratives of modernism, in one big move. But that move can be neutralized either by reaching outside its grasp (no matter how long, wide or high its domain may be, it is still possible to escape its reality), or by sensing the presence of the real inside its manipulations, inside its protective dome, (like in Forster's machine). Thus, it is always possible, if not to escape its containment, to live with(in) its simulations.

In Ballard, escape from the spectacle, escape from simulation becomes eventually impossible because reality itself, its physical truths, have disappeared from sight under layers of their own simulation. As each leaf, each branch (in fact everything and everyone) becomes a simulation of itself, that is, as the spectacular simulation destroys the original down to its smallest detail and replaces it, simulation itself becomes boundless. Here lies the difference: The Hubble Effect has encapsulated all reality not in one big, unified envelope of simulacra, nor shoved it under one big glass dome, but actually taken its place, reproduced its truths down to their smallest, minute details, in endless over-active technicolor reproductions, blurring thus the distinction between the real and its simulation, the representation and the original. Thus, "a life not really lived anywhere but arranged for the viewing" (Benedikt 10) becomes the reality of Ballard's "The Illuminated Man".

The glass-like sheaths of Ballard's "The Illuminated Man" actually prepare us for a further implication of the spectacle and of the simulacra, one that will lead us directly into a new kind of perception of space. As simulation and the spectacle finally take over urban space, its reality retreats further and the decay of city spaces (and their social relevance) is ready to commence.

From here we can pick up some of these stories' implications and make the transition into another kind of space. In a sense, it is not that one day physical space will (literally) disappear from our sight, but it may be the case that, unlike Paxton's Crystal Palace or Forster's machine, which all produce a "containment of nature" (Bukatman, Artificial Infinite 280), one day the competing alternate worlds of detailed simulation will somehow take it away from us in the form of an information overload (causing diseases, like the NAS syndrome in Longos' "Johnny Mnemonic") or simply burying our contact with the outside world under layers and more layers of information that will keep us busy (perhaps) for the rest of our lives. That busy, flowing space of data is cyberspace, one of the themes of our next chapter.

NOTES:

[1]For a specific analysis of glass, its nature and possible meanings in Modern life, see the work of Walter Benjamin.

[2]A more elaborate discussion of Modernism and the avant-garde is presented in the Introduction and Chapter One of this research.

[3]J.G.Ballard is also the author of "Crash" and "Empire of the Sun". "Crash" is a novel to which not only Baudrillard has dedicated an entire chapter of his book *Simulacra and Simulation*, but which, more recently, has been adapted to the screen by David Cronenberg and the latter has also been filmed by Steven Spielberg.

[4]Sturgeon wrote -among other books -- *The Dreaming Jewels*.

[5]This "'new' which could not yet be born" (set of rules for science fiction) is Cyberpunk.

[6]One of the most intriguing characteristics of baroque architecture, it must be noted, is that it is also a universe of simulation. In many of its buildings, painted ceilings or ornaments get actually mixed with real architecture to create an illusory effect of depth or continuity that is only apparent upon closer inspection.

[7]Scott Bukatman coined the term "terminal identity" to describe that in the age of computer terminals, human identity is in its terminal stage, as it is absorbed and becomes a par of, or a function of, the information network that cannot be controlled but rather controls human life. (I am greatly indebted here to Prof. Sérgio Bellei for his consise insight on Bukatman's notion).

[8]Note the interesting connections provided in the story by elements such as: the uselessness of maps, the impossibility of taking pictures from the matter affected by the Hubble Effect, the fact that the only antidote for its effects (so far) is to remain in rapid motion, the transformation of the city into a miniaturized fragment of Versailles or Fontainebleau (both baroque constructions), or the political implications of the fact that the narrator writes his story "within the safety and peace of the garden of the British Embassy at Puerto Rico" (Ballard 75), among many other, not less interesting, references.

[9]My reason for choosing both Baudrillard and Debord is the fact that, because "The Illuminated Man" is open to a number of other approaches, my choice would necessarily not rely on the relevance the theory I would eventually choose has (or had previously) achieved in the academic discussions, but on the fact that any of them would be made possible by "The Illuminated Man". Thus, I have deliberately decided to privilege these authors in detriment of other (equally possible and interesting) approaches also provided by the story. Equally important is the fact that Debord is still the humanist lamenting the loss of the "human" in the age of the Spectacle and feeling nostalgia for the return of human values; Baudrillard shows no concern for this nostalgia, it only reflects much of modernism's sensibility, something done and over with in postmodern times.

[10]Peter Weibel uses the term "vanish" to describe the exhaustion of the real, that is, the continued disappearance of Time and Space in their historical forms (Weibel 167) by means of developments in the technology of seeing.

[11]Perhaps a sign of New Wave's commitment to reflecting the instabilities and anxieties of the times under the apparent stillness of the cold-war era, "when life on the planet" -- as Susan Buck-Morss explains -- "literally hung in the balance over the issue of how government and economy were related" (Buck-Morss EC 113).

[12]See Ballard's other short stories "The Terminal Beach" or "The Watch Towers", for example.

[13]Edward Ball, in his article "Constructing Ethnicity", augments the vocabulary of Debord's spectacle with three notions: Otherness, ethnicity and performance. First he claims that "the spectacle is not restricted to economic phenomena (the intensification of capitalism), or to the culture of images (the growth of visual media). The spectacle is also an encounter with Otherness. It appears as a moment in the consciousness of the subject". For examples and a detailed explanation, see Edward Ball, "Constructing Ethnicity", in Cooke and Woollen, *Visual Display*, 147.

[10]An interesting (and extended) study of the changes in visual perception is carried out by Jonathan Crary in his book *Techniques of the Observer: On Vision and Modernity in the Nineteenth Century*. However, Scott Bukatman disagrees with Crary on how far a total dependence on vision can be actually carried out. As we will see in Chapter III, Bukatman believes this simulation of the physiological conditions of vision have to do with the fact that there's still someone, or, as he explains a "being at the center of the panorama". For a brief history of the developments in the techniques of Optical Simulation that culminate with the digital picture see Peter Weibel's article "Neurocinema". (See Bibliography for full information on both authors).

[15]As Bukatman has aptly put it:

> Baudrilliard's own "master-narrative" is thus a science fiction that repeatedly (and obsessively) narrates the loss of narration and builds its coherence from the evocation of incoherence (Bukatman TI 182).

[16]Susan Buck-Morss, "The Dialectics of Seeing: Walter Benjamin and The Arcades Project", qtd. in Bukatman, TAI 280.

CHAPTER THREE

JUST WHERE IS THE TECHNOLOGICAL SPRAWL TO THE LIMITS OF INFINITY?

OR

THE CITY IN CYBERSPACE

> I put the shotgun in an Adidas bag and padded it out with four pairs of tennis socks, not my style at all, but that was what I was aiming for: If they think you're crude, go technical; if they think you're technical go crude.
> (William Gibson -- "Johnny Mnemonic")

We began this investigation with two short-stories that can be taken to exemplify in science fiction literature a trajectory toward a de-characterization of physical urban space, toward the exhaustion of the representations of the real and its ultimate retreat into the realms of the spectacular and simulation. This movement, beginning with Forster's imitations of reality inside the machine, going through Ballard's exhaustion of the real by a technicolor environment of glass-like sheaths, is completed with the emergence of a totally new representation of urban space. In William Gibson's "Johnny Mnemonic" the spaces of mathematical equations and machine language, simulation and virtual reality, overpower the physical realities of concrete and steel in the representation of its future city.

Now, in our next step we hope to advance how science fiction, as it moves its "totalizing gaze"[1] into the realms of machine language and mathematical simulation, furthers the

decomposition of the real and the materialization of yet a new kind of space, a new kind of urban environment, one which is also being envisioned outside the realms of science fiction's language, as Scott Bukatman notes:

> There exists the pervasive recognition that a new and decentered spatiality has arisen that exists parallel to, but outside of, the geographic topography of experiential reality. (Bukatman, Terminal Identity 105)

This new, decentered and parallel spatiality -- one which had its first roots set long ago in the cities of Modernism[2] -- seems now to subject, to challenge and to short-circuit all of our notions about the human subject:

> ... the sense of displacement or disorientation produced by the environment of the industrial city gave rise to new entertainments, which produced a cognitive and *corporeal* mapping of the subject into a previously overwhelming and intolerable space. (Bukatman, Artificial Infinite 262)

In the context of the Information Age, among those new "entertainments" that induced the human subject into this previously overwhelming and intolerable space that Scott Bukatman talks about are the paraspaces[3] of simulation for which William Gibson's "cyberspace" is one of the most recent developments:

> ...it is science fiction, of course, which provides the most extensive evidence of the necessity of narrativizing and spatializing the electronic field, as well as the most sophisticated means of understanding the separateness of that space. (Bukatman, Terminal Identity 115)

Outside the realms of science fiction, cyberspace becomes relevant as it translates "two frequently noted phenomena: the decline of the master-narratives which structure our understanding of the social structure and the rise of simulation as a prevalent form" (Bukatman, Terminal Identity 106). That is, cyberspace, as it turns an otherwise "infinitesimal and infinitely vast" (Bukatman, Terminal Identity 114) and not completely tangible territory (or set of ideas) into an (at least virtually) tangible "space", also transforms computer technologies (or, for that matter, the spaces "behind" it), into the ultimate metaphor for the many redefinitions that the Information Age forces upon the human and its subjectivity:

> The screen operates as the frontier between the two realities, physical and electronic [terminal]. It is a space without center or ground, and only a vector-graphic simulation of perspective (too crisp, too perfect) to guide a human eye that has suddenly become distinct from its corporeality, its spatiality, its temporality, and its subjectivity. .. The human is lost in cyberspace, trapped within, but excluded from, the matrices of the terminal field, never to emerge intact. (Bukatman, Terminal Identity 108-109)

If -- as Bukatman notes -- one of the heralds of these redefinitions is exactly the computer screen[4], then -- in our present technological stage -- it is vision that seems to ground our experience of this new territory, that is, for the "human" to be lost in cyberspace, with the screen as the only entrance door to this space, vision has to become our main aid to enter this new arena, this parallel world of variables, mathematical

equations and Cartesian coordinates (Weibel 180). Attached to vision, however, there is a seemingly apparent paradox in the representations of cyberspace.

The Trouble with Alberti

Defined by its continual flow of data, cyberspace, or its equivalents, the telematic culture, the Web, the Net, the Grid or the Matrix[5], shifts the emphasis of our experience into a representation grounded on the physiological conditions of vision, conditions which, as we have mentioned before, for Scott Bukatman "can now be simulated"[6] (Bukatman, Artificial Infinite 258):

> While vision may be detached from the body of the observer, it is constantly reattached to an at least partially illusory body. There is a being at the center of the panorama, enjoying the view. The body isn't at the center of Paris, it's at the center of an exhibition, a display -- still, it's at the center of something. As at Disneyland, where the real motion and simulated motion are intricately combined, the actual position of the observer's body becomes a means of support for illusionistic position. (Bukatman, Artificial Infinite 260)

While there is no denying that cyberspace has no center, no point to which everything converges -- reaffirming Bukatman's observation above --, behind most representations of virtual environments lies a device that is centuries old: Alberti's window, a technique for drawing perspectives which supports this

illusionistic position of the observer at the center of things (Pircher 94). In relation to cyberspace and its representations, the use of this device may be a drawback: presupposing a central point of view and a unique point of fugue in Visual Arts, the technique devised by Alberti to draw perspectives has been traditionally associated -- since the Renaissance -- with a fairly true-to-nature representation of reality for its illusionistic powers and so-called neutral point of view. In other words, because the representations conceived through Alberti's window are -- supposedly -- closer to the way humans see the physical world, they should represent reality without distortion.

Western painting, sculpture and theater -- since Modernism -- all have struggled to disengage themselves from the tyranny of Alberti's window. Showing other possibilities for representing reality practically all movements of the avant-garde -- Futurism, Dada, Cubism -- have tried to present new ways of seeing, escaping the traditional perspective drawing method devised by Alberti; this, however, has not occurred with photography, for instance, and the same tendency seems to be happening with the representations of cyberspace. At this point a rupture occurs in our perception: the world becomes divided by those representations forwarded by art, and those forwarded by technology.

As an art form that strongly relies on technique, photography, has always relied on representations of reality that hung upon the principles of Alberti's perspective drawing. Without stepping outside our discussion, it could be argued that photography (and its younger siblings, cinema, television and

video) evolved because it took advantage of the apparent neutrality of Alberti's technique to mask its own limitations. Applied to the mass production of images, these languages have been widely used to frame and seize reality. Much has been said about these questions and, although they seem to have a special appeal to the arts that present a stronger reliance on the mechanics of photographic lenses such as cinema and video, and less to do with a language that is solely based on mathematical abstractions, of particular interest for us here is the fact that because cyberspace also relies strongly on technology its representations seem curiously bound to become soiled by Alberti's window as well. If the single focal point of the lenses used by cinema, photography and video, is perhaps the best example of a normative way of seeing things, the principle of Alberti's window applied to the large scale production of images not only shapes the way in which we see the world but also how we react to it. Much of that contaminates cyberspace as well, as it incorporates to its landscape, footage from home videos and snapshot pictures of its inhabitants.

Curiously enough, it is technology itself that brings about a change in this situation as it reads the world and the body using a variety of newly developed, very specific languages: electromagnetic resonance machines, infrared or radioactive devices and materials can now all be easily tuned to produce mappings of territories never before entered. This is the case of medicine and of the sciences in general. The devices used by these sciences have opened up new paths and created new vocabularies for both understanding and displaying the world. But again one question remains.

When it comes to represent the physical world, technology (as opposed to art) seems intent on offering a very narrow scheme of things. Here there seems to be no two sides for the same coin: to the extent that technology does not have to "trivialize" its views of the world, it resorts to very particular languages accessible -- sometimes -- only to those "in the trade". Some of these "technological" languages are slowly (but steadily) incorporated by art, and it is often the case that they become artistic pieces by their own right. However, when technology deliberately wants to trivialize (spread out the word) what it has to say about the world (as in the languages of t.v and mainstream cinema, for instance), it often goes back to centuries old Alberti's window.

As technology seems to hold the key here, cyberspace can be no exception: the animated, colorful pages that gravitate on the World Wide Web, a.k.a, WWW, are filled with images obtained through Alberti's device. Intent on merely reproducing a much known imaging of the world, they represent only the tip of the iceberg, the part that is most immediately available, that which is on display, shown to anyone. Cyberspace's more interesting sites (or should we say sides), however, continue to be receded, often written in languages much less appealing than those of the World Wide Web, and available only to those with enough knowledge to go beyond these first ante-rooms.

These questions left aside, cyberspace still materializes a breakthrough in our perception of the environment in more senses than that of its displayed representation, and in this respect it also allows for a different kind of urban space to appear in science fiction:

> There is a surfeit of dystopian writings on the city in the latter half of the twentieth century... The city is in crisis, its superstructure decaying while its tax base relocates to less expensive edge cities and other dispersed metrocenters. (Bukatman, Terminal Identity 144)

Thus, the (now common) representation of a decayed urban conglomerate, one that became so dear (and so widespread) to many representations forwarded not only by cyberpunk fiction in the early eighties, but also by mainstream Hollywood science fiction film produced in the same period[7], should be best regarded as a "side-effect" of this new arena for human intercourse that cyberspace literally epitomizes in science fiction.

This chapter will concentrate on both the representations of the spaces inside the computer memory banks, of data constantly flowing, the paraspaces of cyberspace, and the representations of the decayed physical realities outside it, in William Gibson's short-story "Johnny Mnemonic" and its filmed version by Robert Longo.

JACKING IN, ANYONE?

As we ascend into cyberspace, it becomes necessary to explain my own mode of accessing the narratives figured in this part of the research. In order to carry on my analysis of how urban space is represented in the three short-stories selected, I have decided to make a hybrid analysis of "Johnny Mnemonic".

First, perhaps I should explain what I mean by a hybrid analysis of "Johnny Mnemonic". I will be dealing with the representations of urban space (virtual or not) forwarded by

"Johnny Mnemonic", text and film -- short-story and action-thriller -- together as this offers the perfect opportunity to integrate in my own reading of a cyberpunk text, the movement's overt emphasis on the "breakdown of distinctions between pop culture and "serious" culture, different genres, different art forms"[8] (McCaffery 266). That is, because "Johnny Mnemonic" belongs to the cyberpunk movement, it is both an end and a beginning: I believe that inscribed in the analysis of its narrative one should also account for some of the premises that guide the cyberpunk movement.

Thus, my analysis of "Johnny Mnemonic" -- the short-story by William Gibson and the film by Robert Longo -- in spite of following the chronological thread initiated in the previous chapters, will be messing up the media thread. If, until now, we have been solely interested in textual representations, following a fairly chronological development, in this chapter we somewhat revert the process: we start here our dive into cyberspace mixing up insights from the film and the short-story. This seems the logical thing to do mainly because -- as it has been pointed out above -- it becomes pointless to separate both narratives.

In this sense, the analysis of "Johnny Mnemonic" represents the part of this research that diverges from what has been carried out so far. However, as cyberspace stands in for science fiction's latest incarnation for seeing and understanding (urban) space anew, an analysis of cyberspace's filmed representation should be more than welcomed here for, as Brooks Landon again suggests,

> cyberpunk writing is at the heart of a new cultural and media convergence, bringing together writers, video

> artists, computer graphics experts, film and TV production, and performance art of the wildly different kinds represented by John Cage, Laurie Anderson, Kate Bush, Robert Longo, and Mark Pauline. This convergence seems likely to me to mark the end of cyberpunk's print stage, but to transfer its energy, innovation, and commitment to the global arena of electronic culture. (Landon 244)

In this sense, it would be unreasonable not to pay attention to the filmed adaptation of "Johnny Mnemonic", especially since it was directed by Robert Longo (see figure 7), one of the artists mentioned by Brooks Landon above.

Fig. 9. Robert Longo, Now Everybody. rpt. in Klaus Honnef, Arte Contemporânea (Köln: Benedikt Taschen, 1994) 160.

Also worth mentioning is the fact that William Gibson has worked together with Robert Longo on the screenplay of Johnny Mnemonic. In fact Johnny Mnemonic was not William Gibson and Robert Longo's first collaboration: their first collaboration dates back to 1992, when Gibson and Longo worked in one of Robert Longo's performance pieces.

WHATEVER HAPPENED TO THE CITY IN SCIENCE FICTION?

OR

WHO'S AFRAID OF THE WORLDS BEHIND ANY SCREEN?

-CYBERPUNK, CYBERSPACE, PARASPACE-

Cyberspace: The tablet become a page become a screen become
a world, a virtual world. Everywhere and nowhere,
a place where nothing is forgotten
and yet everything changes.
(Michael Benedikt)

Click, click through cyberspace; this is the new
architectural promenade. (William J.Mitchell)

Cyberpunks use all available data input
to think for themselves.
You know who they are.
(Timothy Leary)

Scott Bukatman seems to know exactly who (and where) cyberpunks are, for he begins his description of William Gibson's cyberspace saying that:

> perhaps we can begin to learn about Gibson's cyberspace by learning from Las Vegas or Times Square or Tokyo for, on one level, cyberspace only represents an extension of the urban sector located at the intersection of postmodernism and science fiction... Cyberspace arises at precisely the moment when the

> topos of the traditional city has been superseded. (Terminal Identity 122)

Apart from offering another materialization of an otherwise invisible space, Bukatman's observation can be helpful in a number of ways: it emphasizes -- for instance -- how the "symbolic content" of the Las Vegas Strip (Venturi 116) or the "brazenly pumped-up light show" of Times Square (Kruger 16) translates and reflects the new order of our times, the Information Age. As Robert Venturi and his associates have noted:

> ...it is the highway signs, through their sculptural forms or pictorial silhouettes, their particular positions in space, their inflected shapes, and their graphic meanings, that identify and unify the megatexture. They make verbal and symbolic connections through space, communicating a complexity of meanings through hundreds of associations in few seconds and from far away. Symbol dominates space. Architecture is not enough. ... The sign is more important than the architecture. (Venturi 13)

As sign and communication become more important than architecture, Bukatman's point of view can be neatly tied up to Timothy Leary's -- the LSD guru -- definition of cyberpunks. Because Leary centers the focus of his definition on the subversive role information can acquire, for him, free information in cyberspace provides the creative individual with a tool to understand a world more and more dominated by simulations of life. As such, information can put unlimited power in the hands of individuals:

> The Cyberpunk Person, the pilot who thinks clearly and creatively, using quantum-electronic appliances and brain know-how, is the newest, updated, top-of-the-line model of our species, *homo sapiens sapiens, cyberneticus*. (Leary 247)

If we relate Leary's observations to Michael Benedikt's possible definition[9] for cyberspace used as an epigraph for this section of the chapter, this relation will emphasize the impermanence, the mutable character of cyberspace, showing something of what it hides. Much as the hearts of Las Vegas and Times Square change when their lights go out, so does the promenade in cyberspace. Again, let us see what we can learn from Las Vegas:

> Signs in Las Vegas use mixed media -- words, pictures, sculpture -- to persuade and inform. A sign is, contradictorily, for day and night. The same sign works as a polychrome sculpture in the sun and as a black silhouette against the sun; at night it is a source of light. It revolves by day and becomes a play of lights at night. (Venturi 52)

In cyberspace, the same happens with the tablet, the computer chip: the reality behind the computer screen only becomes a virtual world when -- activated by electricity -- the invisible architecture of the tablet (the computer chip) is guided by a program running invisibly behind the graphics on the screen. This program translates and orders information: a language in itself. When separated from its environment, cut off from its diagramed architecture -- and even in broad daylight -- they remain pretty much inert:

> In one attempt to *envision* the space of the computer, the Museum of Modern Art has hosted an exhibition called "Information Art: Diagraming Microships." ... Within the context of industrial design, the exhibition made perfect sense as an extension of the Bauhausian ideal of form following function, but it was still unsettling to see well-heeled patrons of the arts scrutinizing these complex surfaces for hidden meanings, as though the chip, now susceptible to vision, was somehow also susceptible to knowledge. (Bukatman, Terminal Identity 110)

The irony lies in that, although vision is our only means to enter cyberspace, the apparition of the enlarged chips is somehow not susceptible to knowledge and to experience. At least not the knowledge we have traditionally assigned to the human eye. That is, whether or not the chip is shown in detail, and the architecture of cyberspace enlarged or its concepts eventually translated to human language (the machine language only becomes understandable when it is intended for human input), they remain impenetrable: for the most a set of (mathematical) functions, a bunch of symbols strangely defined by their own set of rules, not at all available to the kind of knowledge we are used to:

> Since most of us are not programmers, after all, we are all denied that godlike status within this "armchair universe" of simulation and control and are, rather, excluded from this new space which remains foreign, decentering, and relentlessly other, its physical parameters reduced to the space of the terminal monitor

> while its electronic parameters seem literally boundless. (Bukatman, Terminal Identity 104)

Or, maybe, as Keanu Reeves/Johnny Mnemonic in the still of Longo's film seems to suggest, cyberspace is all in the mind, a matter of mind geography, a question of iconography carefully abstracted from its generating sources, the inert computer shells inside which everything evolves, in which we all one day will promenade. All this only goes to show how far apart the two languages -- the representations appearing on the screen through Alberti's window and the machine language, actually responsible for performing the tasks we need -- are, in fact, from one another.

Fig.10. An architecture of the mind or just a head about to explode? Still from Robert Longo's Johnny Mnemonic. Video-still by the author.

Whichever thread one chooses to follow, perhaps it is in Thomas Pynchon's[10] early novels that these ideas all converge to

form a consistent literary metaphor. It is Pynchon who (without resorting to the allegories of the New Wave) first identifies the moment when, the traditional topos of the city superseded (Bukatman, Terminal Identity 122), its spatial and economic orientation had to change, had to find a new way out. Seen from this perspective, Thomas Pynchon also provides the entrance door to an early stage into the terminal spaces of postmodernism when all spatial coordinates collapsed in the city and a new form of understanding this space actually gained momentum.

Thomas Pynchon

In his novel The Crying of Lot 49 (1966), it is possible to see exactly how an early version of terminal space begins to function in relation to the urban environment. Before Learning from Las Vegas and even before cyberspace, Pynchon had devised a way of characterizing San Francisco less in terms of its distinguishing architetonic "modernist" (or otherwise) concrete monuments, than as a huge, un-marked sprawl, undistinguished from its neighbor cities, except for another kind of bondage:

> San Narciso lay further south, near L.A. Like many named places in California it was less an identifiable city than a grouping of concepts -- census tracts, special purpose bond-issue districts, shopping nuclei, all overlaid with access roads to its own freeway. (Pynchon 14)

In Pynchon, it is not the physical structure of the city or its monuments that characterize San Narciso as a city. Less identifiable in our eyes by means of its architectural traits,

San Narciso is but a grouping of concepts. Its concrete boundaries and borders rather blurred by a mixture of physical spaces (shopping nuclei, access roads) and abstract notions (census tracts, special purpose bond-issue districts).

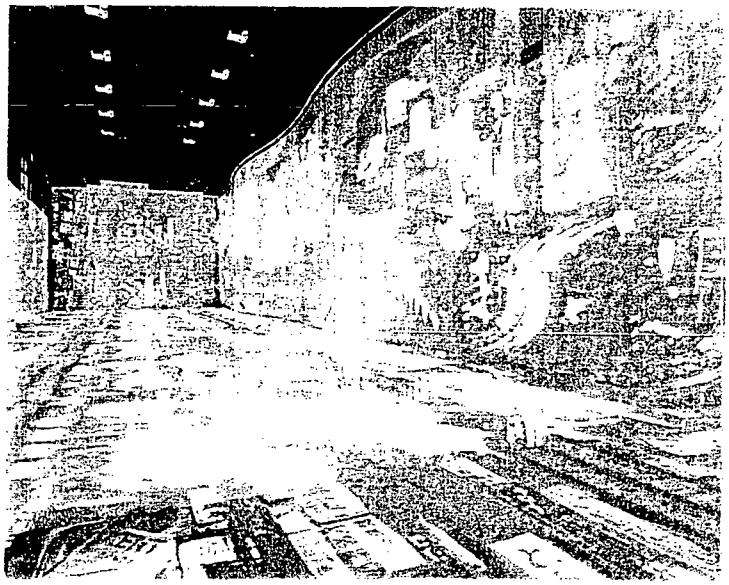

Fig.11. The city also goes virtual in the polished surfaces of Toyo Ito's 1991 installation "The Future of Japan". rpt. in Christian W.Thomsen, Architectur Phantasien: von Babylon bis zur Virtuellen Architectur (München: Prestel, 1994) 172.

Although these spaces, in themselves, are not very different from those modernism has used to characterize its industrial cities, they have changed however in one important aspect: the distinguishing features of Paris continue to be the Eiffel Tower, the Louvre or even Versailles. In Pynchon the distinguishing traits of San Narciso have moved into another realm: they are less rooted in the physical world. The organizing principles through which the city still functions are thus less those of the physical world than those of the symbolic content of information and communication. In this sense, the means through which San

Francisco shows itself have also become rather symbolic.

Such change definitely marks a movement away from the Modernist notions, inviting another conception of urban space to appear. Instead of becoming concrete San Narciso's borders remain abstract. San Narciso is -- in Pynchon -- a place that can be perhaps best understood (and accessed) in terms of terminal space: the artificial infinites provided by a constant of data flow, information stored in memory banks and the procedures for accessing this information. As Michael Benedikt suggests:

> By the late 1960s, ... it was clear that the modern city was more than a collection of buildings and streets, no matter how clearly laid out, no matter how lofty its structures or green its parks. The city became seen as an immense node of communications, a messy nexus of messages, storage and transportation facilities, a massive education machine of its own complexity, involving equally all media, *including buildings.* (Benedikt 16)

As the city becomes a text, represented by these grouping of concepts, we are ready thus for a new kind of fictional environment, one that Samuel Delany describes with propriety, as Scott Bukatman has noted:

> A number of science fiction writers, he [Samuel Delany] argues, "posits a normal world -- a recognizable future -- and then an alternate space, sometimes largely mental, but always materially manifested, that sits beside the real world, and in which language is raised to an extraordinary lyric level." Further, "conflicts that begin in ordinary space are resolved in

> this linguistically intensified paraspace." (Delany qtd. in Bukatman, Terminal Identity 157)

Moving away from the path laid out by Pynchon, one finds in the science fiction of William Gibson one of the boldest articulations of Delany's concept of the paraspaces of science fiction. Represented by a constant of data flow, pure information disguised in vector-graphic perspectives and Cartesian coordinates, a place at once vast and infinitesimal, in which simulation becomes the rule, a place where narrative problems can be solved, a place in which language frees itself from whatever constraints it may have, Gibson's cyberspace translates Delany's idea of the paraspaces of science fiction with perfection becoming one of its latest incarnations. Scott Bukatman also notes that, as they "redefine and extend the realms of experience and human definition in contradistinction to the possibilities inherent to normal space" (Bukatman, Terminal Identity 166) Delany's paraspaces also represent one of science fiction's fundamentals.

If, on the one hand, to speak of the conceptual spaces of terminal space one has many choices -- one can either follow the achievements in fields such as cybernetics, computer technologies, or mathematics thus remaining largely outside science fiction and its narratives -- on the other hand, to speak of cyberspace as a metaphor, one has but one choice: to follow William Gibson's trajectory in cyberpunk in one of his many texts since, as Scott Bukatman has also noted, "terminal space is the domain of cyberpunk" (Bukatman, Terminal Identity 137).

William Gibson

Among the many stories imputed to William Gibson, there is a particularly funny one of how he got his idea for cyberspace. The story goes that Gibson had the idea for cyberspace after leaving a theater (where he saw Ridley Scott's Blade Runner) puzzled and muttering observations about the fact that the spaces behind the computer screens were absent from the film. Whether or not there is any truth to this story, it does not really matter, but this practical joke does show how much Gibson deserves a special place in science fiction nowadays.

William Gibson is generally acknowledged for three major achievements: first, to have introduced the world to cyberspace in 1984 with his novel *Neuromancer* (Bukatman, Terminal Identity 119); second, to have "virtually single-handedly launched the cyberpunk movement" (McCaffery 263); and third, of being its "most archetypal literary figure" (Bukatman, Terminal Identity 146). Actually, the inspiration for cyberspace came from some place else, as Gibson himself declared:

> I was walking Granville Street, Vancouver's version of "The Strip", and I looked into one of the video arcades. I could see in the physical intensity of their postures how rapt the kids inside were... These kids clearly believed in the space games projected. Everyone I know who works with computers seems to develop a belief that there's some kind of *actual space* behind the screen, someplace you can't see but you know is there. (Gibson qtd. in MacCaffery 272)

Now, while the spaces behind the computer screens are not totally absent from Blade Runner (Gibson might have missed the sequence in which a flow of data is pictured on the instrument panel of Deckard's vehicle, making visible the otherwise invisible traffic), it can be said that in its representation of the urban environment, Blade Runner's characters are not totally immersed in a rapturous virtual environment. At least, not in the sense William Gibson had in mind.

Blade Runner's cityscape not only sets the trend in picturing the future in science fiction, it also heralds one of its most meticulously crafted representations. However, in the monumental representation of its buildings, the dystopian context of its narrative, the marvelously designed shots of the Los Angeles cityscape[11] still continue to display the social fabric of the city, whereas in Gibson, it is in cyberspace that one will find the representation of the city's social fabric. In other words, in one sense, Ridley Scott's boundless Los Angeles in Blade Runner is a magnified image of today's cities, not that much different from the cityscapes of, say, real Chicago, or real Los Angeles; only at times does it intersect with the idea of paraspace as understood by Delany, whereas Gibson's cyberspace represents this concept in its entirety.[12] Although the whole city of Los Angeles can be considered a paraspace in Blade Runner, because the conflicts of the film are all solved in its the streets, it does not equal the power of Gibson's cyberspace mainly because it relies on rewriting parts of Los Angeles according to very traditional principles of science fiction:

> One of the most immediate signifiers of the genre of science fiction is the representation of a known city

> in which readily distinguishable sections of today's cityscape are present but other parts are rewritten. (Staiger 20)

In this sense, it is only with William Gibson's novels that, forwarded by a totally new kind of spatial sensibility, that of cyberspace, a completely new kind of environment is brought to life.[13] As it represents the ultimate convention (stage) of this movement towards terminal space, cyberspace, loosely defined as a non-existing place, a "consensual hallucination" (Bukatman, Terminal Identity 156), a "mental geography" or "a parallel universe created and sustained by the world's computers and communication lines" (Benedikt 1), becomes the ultimate representation of narrative urban space in the already imploded spatiality of postmodern times.

"Johnny Mnemonic", the third piece of science fiction to appear under the name of William Gibson[14], and his first one to be turned into a full length thriller movie, presents itself as an excellent site for a cyberspace ride.

The plot of "Johnny Mnemonic" in both the short-story and the film can be made fairly equivalent since we are not dealing with the problems of its adaptation to different media. In short the plot is this: in the future all important information is trusted to mnemonic couriers which, in their wet-wired implants store whatever data someone wants transported safely from one place to another. In order to store this data couriers have to give up some of their own memories. One of these couriers, Johnny Mnemonic, has given up his childhood memories but now wants them back. In order to get the money for the procedure he accepts one last mission. The story of that mission is what is emphasized by

Longo's film: 320 gygabytes of Pharmakon data containing the cure for NAS (Nerve Attenuation Syndrome) smuggled from its headquarters by research people is trusted to Johnny to be transported from Beijing to Newark. Some complicating matters arise as Pharmakon itself thinks it more lucrative to keep the cure secret and hires the Yakuza -- the Japanese Mafia -- to recover the data in Johnny Mnemonic's head. Since Johnny's storage capacity is only 120 gygabytes, he is in danger of not only corrupting the data but also of killing himself.

In Gibson's short-story, although the thriller aspect is also emphasized, the language allows him more liberty in dealing with the theme. As Gibson himself suggested in a recent review for the release of Johnny Mnemonic in video format they were limited by montage:

> I was so deeply involved in *Johnny Mnemonic* to such a bizarre degree in terms of the involvement that Hollywood ordinarily allows a writer; and I think that Robert [Longo] and I were incredibly naive about the things that happen in post-production. So I can see the film we shot screaming silently inside the film Tri-Star released. Imagine what would have happened if the studio had recut *Blue Velvet* with a view to making an absolutely mainstream crime thriller. That's pretty close to what happened to us. (Gibson qtd. in Beard 41)

The mentioning of these facts alone immediately raises a number of questions about the constrictions imposed on authors, screenwriters and directors by film. As the product of an industry in which the equation production costs versus box-office

figures seems to have more relevance and control over the final product (and its destiny) than over the language of someone quietly typing words at home.

NO ONE SEES FOR MILES

The first thing that calls the attention of anyone reading William Gibson for the first time is the overall feeling of familiarity that the urban environment he describes triggers. In the pages of "Johnny Mnemonic" this is not different. Descriptions of the city do not pop up from the text's body like ivory towers from a flat landscape. Unlike many other science fiction texts in which cities stand for a universe that is altogether not familiar, closed in itself and dwelling on the realms of the fantastic and of the thoroughly impossible, Gibson's descriptions of cities do not seem implausible. Although keeping some of the fantastic and the unfamiliar feeling of traditional science fiction, something has changed. The following descriptive lines may offer a good example:

> The mall runs for forty kilometers from end to end, a ragged overlap of Fuller[15] domes roofing what was once a suburban artery. (Gibson 13)

Though Jameson's "totalizing gaze" still applies to William Gibson's descriptions of the city in Johnny Mnemonic, it has nevertheless changed its perspective. The three lines quoted above continue to display the whole of the city of "Johnny Mnemonic", but they cast a very familiar gaze on what a city landscape should be like, showing for instance, among other things, that in spite of being just few descriptions of an urban

space they are powerful enough to illustrate William Gibson's debt to cyberpunk: as it "offered" -- Bukatman explains -- "an important rejection of rationalist technocracy in favor of a science fiction set at street level" (Terminal Identity 140).

For the science fiction of "Johnny Mnemonic" to operate on a street level, that is, for it to represent the absence of the technocratic city in an emblematic way, and to successfully continue to dislocate us in time (raising the usual estrangement of science fiction) what is left of the city has to be built on the debris of a past that, at the same time in which it is immediately recognizable, also lacks complete identification. Hence the familiarity the mall evokes but the estrangement of its structure that runs for forty kilometers of ragged, overlapping Fuller domes.

Consequently, in the previous passage, no matter how enlarged[16] by Gibson's imagination those debris have been, they still convey -- in a condensed form -- our very idea of the world within the world, both contained and on display: the mall in "Johnny Mnemonic" presents both a recognition and a dislocation of times past subjected to our debt to capitalism and its financial rules. It only has to be read according to the correct map, as critic Crawford points out:

> If a map of [mall developers] efforts were to be drawn, it would reveal a continent covered by a wildly uneven pattern of overlapping circles representing mall-catchment areas, each circle's size and location dictated by demographic surveys measuring income levels and purchasing power." (Crawford 7)

This recognition immediately raises a few questions for the reader: first, as the magnificent proportions of Gibson's mall point to the development of trends long noticeable in our own world[17], its most immediate connections with consumption clear, they trigger in the reader an identification with Gibson's environment that goes beyond the "entertaining" function that science fiction has usually played out. Second, this very identification places William Gibson's narrative in a different position in relation to other science fiction narratives. Although it is set in future time, it seems to remain in close touch with our own times.

Of course there is still a city behind "Johnny Mnemonic", but (as in Pynchon) it is less an identifiable city in itself than a grouping of concepts. The places the characters pass by, the places in which they live, have suffered a transformation: what was once ruled by finance and marketing strategies seems now curiously abandoned and ruined, dominated by other forces:

> The three southermost kilometers roof Nighttown. Nighttoown pays no taxes, no utilities. The neon arcs are dead, and the geodesics have been smoked black by decades of cooking fires....
>
> Nighttown spread beneath us like a toy village for rats; tiny windows showed candlelight, with only a few harsh, bright squares lit by battery lanterns and carbide lamps. (Gibson 14-15)

On the imploded borders of the mall, Nighttown reproduces (for decades now) the decayed suburban areas and ghettos around towns: candlelit rooms and cooking fires have replaced the evanescent artificial light and perfect synthetic food of Forster's science

fiction. These are the places capital has forgotten: when there is no exchange value being applied to these spaces, there is no money running on its streets, so their function as markets die away. Capital and its power, the absent forces that have made urban spaces always shine bright in science fiction, come alive in "Johnny Mnemonic" exactly because they are absent from its "streets", its cityscape:

> Everything there had been covered with that same uniform layer of spraybomb graffiti: gang names, initials, dates back to the turn of the century. The graffiti followed us up, gradually thinning until a single name was repeated at intervals. LO TEK. In dripping black capitals.
>
> "Who's Lo Tek?"
>
> "Not us, boss." She climbed a shivering aluminum ladder and vanished through a hole in a sheet of corrugated plastic. "Low technique, low technology." (Gibson 14)

In this sense, if anything is left, it has to be (re)built from the leftovers of capital and technology. The Lo Tek graffitis -- meaning low technology, low technique -- are the trademark, the people's emblem of this absence: the disappearance of capital from the streets of "Johnny Mnemonic"'s city is what makes it look much more like the shanty towns around the world than like the upper middle class districts outside the cities of today. And that can also be felt throughout Gibson's story, and not only in the descriptions of the city space: it is a world inhabited by pimps, transvestite bodyguards, surgically augmented muscle-boys, kids high on designer drugs.

Something has been taken away, perhaps by force, from these once glittering surfaces. What has changed? What is different? And how? William Gibson's answer, as it uses the mall to totalize future urban space, points out to a different direction.

In its obsolescence and decay, the mall represents exactly the opposite of what it meant in former times: the absence of capital circulation inside its protective domes, the absence of motion: "No longer is the city the site of circulation, motion, *action:* if it retains a monumental status, it has become a monument to entropy" (Bukatman, Terminal Identity 121). Having long reached its peak (the structure of the mall extends itself for forty kilometers), the logic of capital -- now absent from its structure -- can only be recognized in its inert walls, arcades and spaces. In spite of still identifying the city with itself, covering all its territories and turning the cityscape into a concrete metaphor for the circulation of goods, for the exchanges that once took place in its imploded bosom, the mall does not herald that relation anymore: left to rot in it, there are only the leftovers of capital surplus, the debris of dreams long sold: "If the city is now figured as an inertial form, it is so because of this new arena of action that has usurped the urban function" (Bukatman, Terminal Identity 121). This new arena, in Gibson, is cyberspace.

Thus, in "Johnny Mnemonic" the inert body of the city is represented in a way that even its evidence may be dismissed: both in the film and in the short-story, its representation is far too common, far too simple to produce much estrangement. However, as this seems to be exactly the case, it works by means of an inverted rationale.

In Longo's film, representations of the city (its streets, buildings, malls), function exactly according to Gibson's ideas: if any future is to be "seen", this future will not be apparent in its real streets and places; on the contrary, these places are immediately recognizable because they "date back from the turn of the century", our own times, the time in which the shift to the virtual spaces occurred.

Thus, little estrangement can be expected from the representations of the physical city in Johnny Mnemonic, that is, unlike Blade Runner, if representations of Johnny Mnemonic's scenographic city appear almost as if no attention had been devoted to its construction, it is because it is not "there" that one finds the future represented, it is not in *the mise en scène* of the physical city that one finds the future represented, but inside the virtual places of cyberspace, in the special effects that have been designed to represent cyberspace.

In this sense, it is not that less attention is given to an elaborate representation of the urban landscape of Johnny Mnemonic, but that the "real" city of Johnny Mnemonic has stopped "growing", has stopped reflecting the transforming changes of technology in itself long ago to become this inert, immense body of decayed buildings of the turn of the twentieth century, that they resemble our own present is, therefore, no coincidence. This representation does not exactly function in the same way as Ridley Scott's urban landscape for Blade Runner, for example. For cyberspace to work effectively as a paraspace, Gibson and Longo had to concentrate in its representation all the displacement usually put by science fiction film in the *mise en scène* of the cityscape.

Thus, the physicality of the urban environment in both the film and the short story can not represent (in its future) a much different cityscape from that which we are already used to. This fact, however, collaborates to create a difficulty in reading those spaces: if one is not aware of this shift in emphasis, this move goes unnoticed, masked, by the apparent scenographic poverty of Johnny Mnemonic's future city. That is, because in Gibson the physical city has ceased to mirror in its monumentality the developments occurring in its social and economic fabric, Johnny Mnemonic can not display a very elaborate representation of a future city like that of Blade Runner, for example. Their representations work on different levels. Johnny Mnemonic's representations of the future city owe thus more to an aesthetics of approximation, not of dislocation, its representation of the future dangerously mimicking our present. Johnny Mnemonic, however, is not the first science fiction film to have described the future in these terms. Jean-Luc Godard's Alphaville

> is in every way indistinguishable from contemporary Paris. The 'spaceship' of secret agent Lemmy Caution is his Ford Galaxy ... For the first time in science fiction film, Godard makes the point that in the media landscape of the present day the fantasies of science fiction are as 'real' an an office block, an airport or a presidential campaign. (Ballard UG 19)

But, in Johnny Mnemonic there is cyberspace and that complicate things a little. As cyberspace becomes the latest incarnation of the city of the Information Age, a number of things, among which, capital circulation, also have to be represented in its virtual spaces. Thus cyberspace stands out as

a powerful generative metaphor for the complexity of our postmodern times, "an expression of the disembodied and dislocating spaces of the postmodern city in which sign and spectacle dominate, in which reality seems usurped by its own simulacrum" (Bukatman, Terminal Identity 148). Differently from Alphaville, the cities of Johnny Mnemonic (Newark, Beijing) are cities that seem to have been usurped of their life by their own simulacrum taking place in cyberspace.

For this perspective to be made complete, that is, for the electronic and physical spaces to be made equivalent (Bukatman, Terminal Identity 148), there has to be a driving force behind the appearance of cyberspace. That force is capital and its circulation which, driven by new technologies, move now inside the memory banks of the computer, its new markets. Such change, as we will see, is made even more apparent in Longo's version of Gibson's "Johnny Mnemonic".

JOHNNY IS ABOUT TO LOOSE HIS COOL(HEAD)

The very first establishing shot of Robert Longo's Johnny Mnemonic is emblematic of the reversal in our perception of space. It is a shot that privileges simulation over imitation of physical reality and that emphasizes the virtual values inside a computer, instead of their concrete, physical reality. In this sense, Longo's Johnny Mnemonic already dwells on a different space than that of our previous representations. Significantly different too are the responses these virtual places invite.

No longer than a few seconds, this establishing shot already changes many paradigms of the representation of urban space in

the film we are to see, the space in which its narrative takes place, that is, this shot is already representative of the many changes in the representation of space that the narrative of Johnny Mnemonic brings to life.

The City Goes Virtual

After the spectator is given the necessary background information about the context of Johnny Mnemonic's story, what s/he is shown in Longo's film is not the fantastic, monumental city (dystopian or not, like in Ridley Scott's Blade Runner and Cameron Menzies Things to Come or indistinguishable from our contemporary cities as in Godard's Alphaville), but a rather over-detailed, "unthinkably complex" visualization of data being accessed, shared and travelling inside what should stand for representations of computer memory banks.

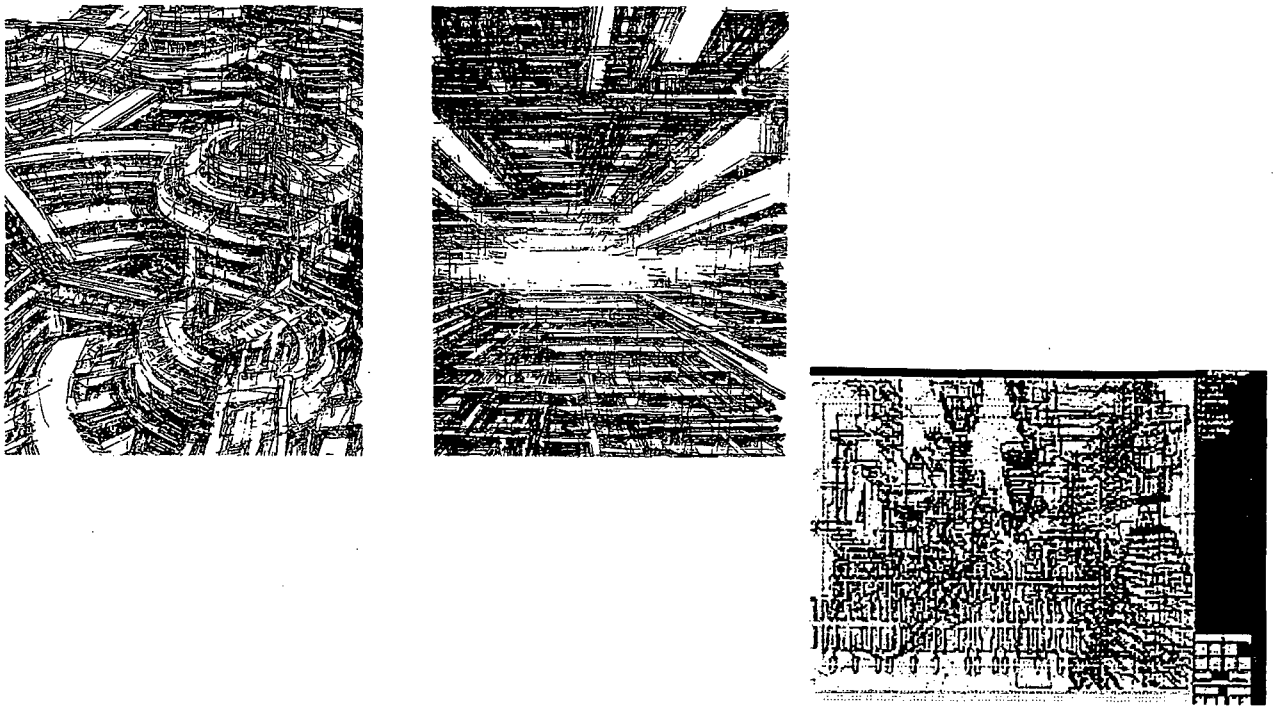

Fig.12. Two sketches of Gerald Exline's "Future City" next to Johnny Mnemonic's artwork for cyberspace. More than a case of

similarities or necessarily quasi-identical environments? rtp. in Christian W.Thomsen, Architectur Phantasien: von Babylon bis zur Virtuellen Architectur (München: Prestel, 1994) 166. & Bit mapped image of Johnny Mnemonic's artwork from Sony Films' site on the Internet, 30/10/96.

Moving fast along depthless, busy lanes this data travels inside a virtual environment, its architecture, a simulated city made of various types of stored information existing to be called, directed and shared. As it moves to its destination, in the case, the screen -- its interface, the frontier between the two worlds -- we observe this data slowly transform itself from something which "had never been intended for human input" (Gibson CZ 24), machine language, algorithms and equations, into readable information: appearing on the screen (its frontier) are instructions that can eventually be understood by a human being. After that, another shot shows a reflection of this information in Johnny's/Keanu Reeves pupil. Without ever breaking the barrier between the two worlds -- the virtual and the physical one -- this data, however, manages to trespass it.

This place, a busy multi-dimensional space, we are told, is the Internet by the year 2021 and the trip we follow is merely a wake-up call being directed from somewhere in cyberspace to Johnny Mnemonic, the courier, in his hotel room. Much different from the Stargate sequence of Kubrick's 2001, in which a continuum of spatiotemporal transmutations is emphasized (Bukatman, Artificial Infinite 271), the special effects of these first establishing shots of Longo's film, owing thus less to the mind expanding trips of LSD, actually emphasize questions regarding the functionality and the operationality of all objects in this world of simulation.

By the operationality and functionality of this virtual environment I mean what the apparently meaningless Euclidean forms of cyberspace "hide" for the human eye: their true nature. In this space such forms are only a display, they "hide" both the equations, algorithms and mathematical formulas which, translating machine commands, directing orders and opening bulks of data, very specifically perform the desired, "visible" tasks we need. Their true nature becomes recognizable, then, only if we can guess their function -- that which is hidden beneath their appearance -- from their surfaces. It is a game of appearances played in reverse order: in cyberspace these surfaces are the only displays we have to guide us. And they can remain forever abstract unless one is able to read beyond them.

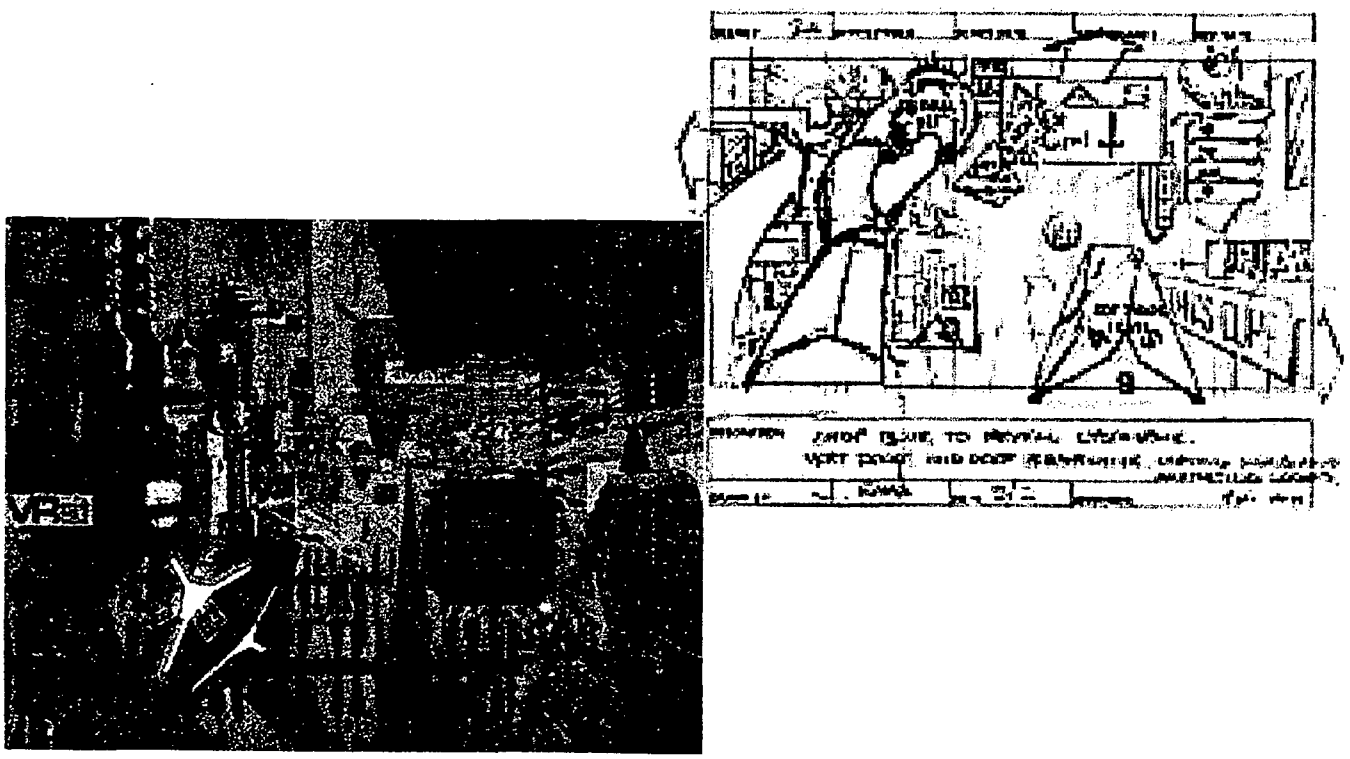

Fig.13. A Cyberspace ride as seen in Longo's Johnny Mnemonic: Two sketches for Johnny Mnemonic's cyberspace. Special effects entirely based on computer graphics are the budget-friendly answer for Longo's view of cyberspace. Bit mapped image from Sony Films' site in the Internet, 30/10/96.

Ruled by the endless combinations of zeros and ones, energy or its absence imprinted on its silicon circuits, the nature of these shapes form a language foreign to us: it can remain forever stored, forever alien to us unless we -- humans(?) -- by becoming part of the machine itself, "wet-wired" to its system, cyborgs of the Information Era, "tap wired" into its system like Johnny, can "jack in", log onto this machine and take part of its innermost transactions.

Before that, we can only watch the course of its surfaces from a (safe) distance. As readers of a story, although we can sometimes get carried away by the descriptions and reality of the printed page, it only takes us a second to close the book and come back to "reality". The material existence of the book is the frontier. We are kept at a safe distance from the events occurring on the pages of books by the medium itself: the printed page can be arresting, but we are never completely caught -- in a rapturous game -- by the environment that evolves, word after word, in front of us. In film a similar relation can also be kept. In Johnny Mnemonic, for instance, this safe distance is played out by the computer generated special effects[18] of the film:

> The genre of science fiction often exhibits its spetactorial excess in the form the special effect, which is especially effective at bringing the narrative to a spectacular halt. (Bukatman, Artificial Infinite 265)

Thus, as spectators at a spectacular level, although we travel along with this data, although we follow its course breaking

through the vector lines that divide and activate this electronic space, in spite of all this, we do not become part of this environment: vision, however, does.

As vision becomes a part of this landscape, it does not mean that it enables us to recognize, differentiate or interact with the minute details of this "special effects" landscape, nor to wander aimlessly (trips of another kind) in cyberspace in the way its characters can. Johnny Mnemonic's mother, for instance, has no physical being, she is a consciousness afloat in Pharmakon's systems, a digital citizen and a ghost in the machine. She is defined by a collection of data that, although free to move inside these virtual spaces, can be easily effaced whenever necessary; her existence, and thus her "life", is more easily destroyed, altered at will, than the existence of a "real", life-size person. Fact and fiction, reality and simulation in becoming so inextricably connected, so much bound to one another to an extent never before imagined, resemble much of Baudrillard's (and perhaps of Ballard's) terminal fictions in which "referentiality and legitimation are finished" and "there is no longer an unproblematic and empirically verifiable real to refer *to*". (Bukatman, Terminal Identity 107)

Thankfully, for us, this space is only on display. Safely kept apart by the screen, we are still inhabiting the physical world. But that can mean distinct things. First, in the virtual spaces of data circulation and processing, form follows function (the modernist motto tuned to the Information Era), for it is either addressed to someone else or another program, only then becoming available (as communication, as information), or it remains (forever) in stand by until it is called, directed to its

interface. In cyberspace, everything having its very specific function (there's no idle time, only its computer generated equivalents[19]), the bulks of data piled up in "pure Euclidean forms of pyramid and cube (albeit in scarlet and green)" (Bukatman, Terminal Identity 140) of this virtual space can easily become a commodified architecture, a coded landscape of capital. Second, as Bukatman notes,

> Special effects redirect the spectator to the visual (and the auditory and even kinesthetic) conditions of the cinema, and thus bring the principles of perception to the foreground of consciousness. (Artificial Infinite 265)

In this way, although, in the "horizonless" representations of cyberspace from Johnny Mnemonic's special effects, the principles of perception still foreground consciousness, still permit the audience to groove on its technologies (Bukatman, Artificial Infinite 271), they also complicate things a little. The liberty one finds to wander aimlessly in the environment created by a Douglas Trumbull special effects sequence (Bukatman, Artificial Infinite 270), for example, can become very problematic, if not a totally distinct term in this narrative exactly because the environment described both by Longo and Gibson does not allow for that kind of consciousness:

> We're an information economy. They teach you that in school. What they don't teach you is that it's impossible to move, to live, to operate at any level without leaving traces, bits, seemingly meaningless fragments of personal information. Fragments that can be retrieved, amplified... (Gibson 17)

Thus, just as in Blade Runner, "a classic scene, the search of a room for clues... Deckard's electronic inspection of a photograph ...is played out in terminal form", (Bukatman, Terminal Identity 136) in one of Johnny Mnemonic's most striking sequences involving a representation of cyberspace, the popular chase after the hero is also carried out in "terminal form". Only this time, in the lanes of the Internet. As this chase -- except for its final sequence -- is not played out on the streets of Newark, it becomes a matter of interaction between the human and technology, of nanoseconds of time measured against the speed with which a computer is able to process information. Not on your ability to run. Inside the computer memory banks, inside the information highway, freedom eventually escapes the reach of the human experience.

Fig.14. The Yakuza expert: by amplifying and retrieving the traces left on the Net by Johnny he is able to access his exact location. Video-still from Longo's Johnny Mnemonic, photograph by the author.

Displaced to a virtual form, the nature of the chase also changes: the Yakuza, hired to recover Pharmakon's stolen data out of Johnny's head, can track down his every move in the Internet, retrieving and amplifying the fragments, the meaningless traces he left on the Net. The chase that takes place thus is not one in which the streets of Newark figure, but one in which the depthless lanes inside the information highway, with the Yakuza's computer expert following, tracing down Johnny's steps inside the computer, are used.

Fig.15. Cyberspace headgear: does the subject see ahead of the difference between blindness and insight? Video-still from Longo's Johnny Mnemonic, photograph by the author.

As represented on the screen by Longo's Johnny Mnemonic, virtual reality technologies trigger a rather disturbing ambivalence: while the subject is immersed in its simulations, it becomes blind to the world outside, an easy prey for those with access to both realities: Johnny Mnemonic only escapes the Yakuza because Jane, standing near him, hears the arrival of the cars outside the room and pulls him out of the simulation. In the simulated spaces of the Net, everything, not only freedom, becomes simulation: to move inside the virtual world one has to stand still, either in one place or moving inside one single lane (that of the connection) but always inside simulation, inside representation, bound to computer time and bandwidth. Thus, this freedom, like the freedom of its objects (for they have their function written in machine language) is only illusory, an *ersatz*, a partially functioning substitute for what has been really taken away: real space, real freedom.

NOTES:

[1]As we have seen in the Introduction, this notion comes from Fredric Jameson. It is worth remembering how Bukatman explains it: "Additionally, there is Jameson's observation that science fiction is defined by the display of a totalizing gaze which reveals the entire city (or planet or machine) in a single action of vision or description." (Jameson qtd. in Bukatman TI 123)

A good example of this "totalizing gaze" can be seen in the original Star Trek series episode called "A Taste of Armaggedon". One single scenographic painted background prop is used to characterize an entire alien city throughout the episode. Captain Kirk and the Enterprise crew keep coming back to this more than still cityscape a number of times. Always shot from the same distance and angle, these shots only serve to totalize and define the otherness of the place in which the Enterprise crew has landed.

[2]Bukatman, quoting Sharpe and Wallock, gives the following explanation:

"The city is the locus of Modernism, and each aspect of city life seems to generate or demonstrate a characteristic of this artistic movement -multiplicity of meaning , loss of sequential or causal connection, breakdown of signification, and dissolution of community. For artists and writers the modern city has come to mean as much a style, a fractured syntax, a paratactic sign system, as a physical construct with certain demonstrable boundaries." (Sharpe and Wallock, qtd. in Bukatman TI 168)

[3]Samuel Delany's term (Bukatman TI 157) to which I will return later on.

[4]As science provides most of the elements through which one perceives the world today, it becomes our ultimate master-narrative: its relevance identical to its power for advancing new metaphors together with its technologies and products. In producing a simulation of vision, computer technologies become the last step in this direction. Of course one can object that there are other heralds of that transformation, but it is rather difficult to deny that the computer screen actually represents this frontier in one of its most encompassing metaphors. Slavoj Zizek also gives the screen a privileged place in his analysis of the theme: for him it operates on the verge of the two worlds as well, only this time using Lacan's ideas on Seminar II and XX. (Zizek 111).

[5]All these terms appear in Bukatman TI 105. Telematic Culture is the name used by Baudrillard.

[6]As an illustration of postmodernism's concern with representation, Scott Bukatman's point of view is also presented in the Chapter II of this study.

[7]See, for instance, John Carpenter's Escape from New York of which William Gibson says it had a "real influence on Neuromancer." (McCaffery 266)

[8]When Larry McCaffery asked, in the same interview with William Gibson, "What impact have other media had on your sensibility?" Gibson answered: "Probably more than fiction. ... I've been influenced by Lou Reed, for instance, as much as I've been by any fiction writer. I was going to use a quote from an old Velvet Underground song -"Watch out for worlds behind you" (from Sunday Morning)- as an epitaph for Neuromancer." (McCaffery 265)

In the film Longo has also emphasized this aspect of cyberpunk by using actors from different backgrounds to play the main roles: hollywood stars (Keanu Reeves/Johnny), underground actors of the sixties (Udo Dier/Ralfi), stars from the New German cinema (Barbara Sukova/Anna), punk rock and hip hop / gangster rap singers (Henry Rollins/Spider & Ice-T/J-Bone) and television stars (Dina Meyer/Jane) all divide the same space on the screen providing some sort of estrangement to the movie as well as a connection to "its street level."

[9]This is Michael Benedikt's fourth -- in a series of ten -- speculative definitions for cyberspace.

[10]Although he cannot be identified with cyberpunk, Pynchon is always mentioned by cyberpunk writers.

[11]One can say that in contemporary science fiction, the Tyrrel building of Blade Runner has become as emblematic of the genre as the Manhattan-like skyline of Fritz Lang's Metropolis.

[12]See Bukatman, TI, pages 157 to 161 for an interesting application of Delany's concepts to other narratives.

[13]In this respect Scott Bukatman says the following: "the publication of Neuromancer in 1984 was preceded by at least three films that in varying ways, had a formative impact upon the cyberpunk aesthetic: *Videodrome, Blade Runner and* and *Tron* (all 1982)" (Bukatman TI 137) Although William Gibson himself only mentions John Carpenter's Escape from New York as a real influence (see McCaffery 266), Bukatman's point is still valid in terms of his own analysis of the novel.

[14]According to him, "the only basis I had for gauging its success was that it sold." (McCaffery 268)

[15]R.Buckminster Fuller, the architect who created the design of the geodesic domes, light structures based on Euclidean forms that are able to sustain more weight than they apparently do.

[16]Scott Bukatman discusses in *Terminal Identity* an interesting characteristic of recent science fiction, namely that "much of [its] pleasure results from continual transformations of scale and perspective". (Bukatman TI 133)

[17]In this respect see Margaret Crawford in her article entitled The World in a Shopping Mall, where she describes -- among other things -- some of the politics of "the malling of America", a position not only aspired by America itself:

> "Although by 1980 the American landscape was crowded with these palaces of consumption [the malls], the rest of the world was still open for development. The form could be exported intact into third world economies, with local developers providing enclosed shopping malls as exotic novelties for upper-middle class consumers in Caracas or Buenos Aires." (Crawford 11)

[18]Scott Bukatman says that cinema can itself be considered some kind of special effect:

> A too-easy historicism has tended to divide cinematic representations into naturalist and anti-naturalist categories (Siegfried Krakauer's realist versus formalist debate). Within this dichotomous schema, special effects hark back to the imagistic manipulations of George Meliès, but it should be clear that even the supposedly naturalistic Lumière brothers were purveyors of spectacle and novelty. Cinema is, of course, a special effect, and that is how it was regarded by its initial audiences. (Bukatman TAI 264)

[19]About which James Rifkin -- quoted by Bukatman -- says:

> ...the computer has also effectively superseded the human experience of time. The new 'computime' represents the final abstraction of time and its complete separation from human experience and the rhythms of nature. (James Rifkin qtd. in Bukatman TI 105)

What has been Left Unsaid

or

How to Play with Tentative Conclusions

Our study has aimed at investigating some of the images of urban space in a selection of science fiction short narratives, a genre that has produced so many and -- at times so different -- representations of the future city.

In both modernist and postmodernist science fiction narratives, images of future cities are as abundant as they are disparate. Taking, for example, the nightmare envisioned by Forster, the technicolor dreams of Ballard, together with William Gibson's "Johnny Mnemonic" and its adaptation to the screen by Robert Longo, we can already form a mosaic of uneven, wildly different patterns.

In 1909, in E.M.Forster's conception as depicted in "The Machine Stops", space consists in imitation, the future city an imense machine that imitates life. Technology superimposes a more controllable, perfect pattern onto the world -- which has no form outside a machine -- by means of all sorts of imitation. From food to architecture, all of life becomes imitation in the bowels of an all powerful entity: imitation marble, imitation food, even the architecture of the underground city imitates that of the beehive. Everywhere there is plenty of imitation and no need for the worlds of physical reality. These have been replaced by their imitations which, far from being perfect but bearing the hallmark of technical excellence, are good enough to live with. Humanity's problems seem to have been solved. The world at large, replaced by its imitation, is under constant control, perfected through

imitations which are apparently flawless. This modern, coherent view of the world, has only one -- huge -- flaw: one day the machine begins to fail and eventually stops producing its imitations of life.

In the mid sixties, J.G.Ballard proposes another kind of representation. He envisions the future city and the whole environment as becoming totally inaccessible. Involved in glass-like sheaths, urban space becomes prey to a spectacle of over-active technicolor simulations that reproduce and replace the environment down to its smallest detail. The science fiction of "The Illuminated Man" (a pun with Enlightenment?) seems to set a different pattern of representation to work: with the exhaustion of the language of modernism, physical space starts to be seen as uncontrollable, multiple. Ballard's allegory of the "Hubble Effect" inaugurates a different age in science fiction and the genre begins to address more contemporary issues: the "Hubble Effect" becomes a metaphor for many of the doubts and anguish that eventually will become the trademark of postmodernism. Escaping the dichotomous terms of salvation / damnation of most Modernist science fiction (as discussed in Chapter 2), J.G.Ballard introduces science fiction to one of the first battles between the reality of the physical world and the spectacle of its simulacra taking place simultaneously. We could say that the age of simulation begins.

Closer to the end of this century (1987), the science fiction of William Gibson wins an important battle of the war for spatial supremacy: virtual space wins over physical space, as shown in the interfaces between the virtual and the physical environment proposed in "Johnny Mnemonic". The dividing line

between physical and virtual realities becomes blurred, humanity and technology become one and the same. As we have pointed out in Chapter 3, for Bukatman, science fiction has the very special function of "compensat[ing] for the loss of the human in the labyrinth of telematic culture by simply transforming it into an arena susceptible to human control." Then we could agree with him that "recent SF frequently posits a reconception of the human and the ability to interface with the new terminal experience -- as in cyberpunk -- and thus a uniquely terminal space becomes a fundamental part of human (or posthuman) redefinition." (Bukatman Terminal Identity 118)

In their spatial configurations, cities in science fiction become the locus of representation for many of the problems that plague the twentieth century, a place for a series of interrogations. If narratives can be read as "imaginary resolutions of real contradictions (as Lévi-Strauss described myth)" (Bukatman Terminal Identity 106) then what we witness in these science
fiction texts are the imaginary resolutions Forster, Ballard and Gibson have found for the contradictions and dilemmas of their own times, their representations being a sensitive barometer of the cultural and political climate of the day, as J.G.Ballard himself has once suggested.

In the 20's, Forster's barometer points to a critique of Modernist ideals. "The Machine Stops", shows the ideals of Modernist architecture, perhaps the ideals of Modernist thought, literally starting to crumble under the pressure of its own dogmas. Forster's criticism goes straight to humanity's trust in progress and technology as providers of a better future.

In the 60's, Ballard, on his turn, presents a curious mixture of beliefs; his characters, however lost in a world that has become inaccessible through spectacular simulations, still believe in salvation, still hang on to memory to find the key to their present. But hanging on to memory is not enough to help the human subject escape the spectacle of multicolored glass-like sheaths taking over the environment in what seems the final countdown before virtual reality, an entire world of sign and simulation, eventually emerges as in "Johnny Mnemonic". In Ballard, the substitution is completed as the physical environment, not only memory -- the lost referent, the past -- becomes spectacular, reproduced through simulacra. In this sense the whole environment becomes a metaphor. Covered by the hundreds of perfect over-active technicolor reproductions even the physical world becomes a representation. Literally.

Finally, in the 80's, in the science fiction of William Gibson, there is the emergence of cyberspace itself, a consensual hallucination, a mathematical abstraction, a field with unlimited storage capacity, which -- taking place behind the inert shells and screens of computers -- seems to overpower physical reality to an extent never before imagined.

Science fiction, by representing such a variety of patterns, allows us to take this leap from the world from a comfortable position: although it sometimes may appear superficial, even naive; although it sometimes may apparently lack the depth of other kinds of fiction, we could say, with Ballard, that it is in science fiction that "the collective dreams and nightmares of the twentieth century have found their most vivid expression" (Ballard UG 17). In producing narratives that, as Paul Alkon

notes in his *Origins of Futuristic Fiction*, "tell what we are by showing our collective desires and fears" (Alkon 4), science fiction becomes then a privileged field for understanding the present.

Because it is closer to us, the virtual spaces of "Johnny Mnemonic" deserve a closer consideration. If cyberspace introduces us to a different kind of experience of space from that which we are already used to -- its solely abstract spaces are not really "entered" but "imagined" to be entered, its rules are those provided by its own special kind of constraints and not by those of the physical world -- then cyberspace also invites other conceptions of reality which can become very problematic. For, although that experience is available to top researchers in the sophisticated technologies at MIT's Media Lab, in the glittering -- but somewhat too still -- nine million pages of the Internet, in its even denser network of authorless, endlessly boundless hypertexts, it is also to be found in almost every corner bookstore and magazine stand in the form of the old, pulp science fiction book.

While cyberspace in itself is perhaps shapeless and boundless, its representation -- in either literature or film -- must necessarily preserve the original limitations of these languages. Given the physical distance readers and spectators must keep when either watching or reading a narrative about cyberspace, it can be argued that cyberspace can only be experienced in its true form by direct experience. In other words, the experience of cyberspace is one that can only be transferred to other media at the expense of its true nature:

> The lack of a vision adequate to the electronic datasphere has led to a set of allusive attempts to reconstitute the space of the computer in human -- biological or physical -- terms; in other words, *to permit terminal space to become phenomenal.* (Bukatman Terminal Identity 109, emphasis in the original)

Without the possibility of being ever fully transported, translated or eventually equaled in other media, the dimension of its importance (newness) is dramatically lost: cyberspace has not yet broken its frontiers, but only and barely managed to trespass its first screens (barriers).

Apart from all that, and perhaps more importantly, much of the experience of cyberspace is bound to yet another kind of constraint, the very system of representation used to convey its illusion.

AGAIN, THE TROUBLE WITH ALBERTI

It seems now that, although the distortions of Alberti's window are well documented and known (see discussion in Chapter 3), it threatens a comeback in cyberspace given the purely mathematical nature of the representations displayed by this new arena. If, on the one hand, this yet different kind of perception of environment is one which solves the impossible, overwhelms the intolerable and produces all sorts of (utopian) effects imaginable (and unimaginable)[1], on the other, many representations of cyberspace are centered around a very western

notion of space: Euclidean mathematics and Alberti's perspective with its (also mathematically) construed single point of fugue.

In this sense, although cyberspace is really decentered, responsible for removing "us" from the "real", physical world, its representations (contaminated by the illusionistic values of Alberti's device) aim at a false neutral position in relation to the observer: a center that has no center but bears the illusion of a center.

Around this illusion at least half of Modern and Contemporary Western culture (or should we say, post-capitalist culture) has already been constructed. That is, although the human is lost in the labyrinth of cyberspace, we are still guided by the sensory stimulation of vision which, on its turn, is controlled by the illusion of Euclidean mathematics and Alberti's perspective:

> Electronic space thus projects a Cartesian ideal in the form of a perfectly coordinated and potentially infinite space, and objects within that space become functions of the coordinate structure. (Bukatman Terminal Identity 111)

This representation of artificial space has been culturally acquired and is now centuries old. As we continue to believe in this illusion of a center and to inhabit the spaces of the physical world, there is no freedom in the vector-graphic simulations of cyberspace. In the virtual spaces created inside the computer shells we are once more denying the fact that in many of its representations there is a powerful illusionistic tool at work.[2] But this is the seemingly unsolvable paradox of many of the representations of cyberspace: although not real, not

based on any physical reality, these three-dimensional representations and image rendering are passed onto us as a "new" breakthrough reality, instead of being recognized as culturally acquired because of their use of Alberti's device. The problem lies in that we tend to see these representations as "natural", or "real", instead of culturally acquired (Pircher 95), because the images produced by Alberti's device have always been associated with the (illusion) of the natural, the neutral and the real. This is the trouble nobody has ever overcome in respect to Alberti and one of the issues that art and photography -- for instance -- sometimes so openly display.[3]

Perhaps what I am trying to say is that what is eventually -- once again -- at stake is freedom. It does not really matter if one hides the structure of what one says or tries exposing it, these structures -- the cultural frames according to which we all work -- always remain clearly constrictive forces at work within our minds. Perhaps it must be like this: that in all systems of thought prisons exist. But that physical space (replaced by its electronic equivalent, its simulation or even its imitation) can also become a prison, this may be something to consider.

NOTES:

[1]Bukatman notes: "[cyberspace] frequently permits the subject a utopian and kinetic liberation from the very limits of urban existence." (Bukatman TI 146)

[2]Perhaps this is still not so important. Cyberspace nevertheless continues to be this screen on which some pictures and a few images barely move due to restrictions in bandwidth, memory and processing power. But think of what is still in store for us, entire environments simulated through Alberti's device: living rooms in which one day we will all chat... shopping and leisure areas all rendered by this very crisp perspective?

[3]An interesting example of the distortions masked by photographic lenses are the objectives with short focal distance (less than 38mm). These seem to include more of the scene than actually is possible, producing distortions at the borders of the picture, which all seem to bend towards the center of the image. An extreme distortions are obtained with the so-called "fish-eye" objectives. With a focal distance of 7.5mm or less: these lenses represent everything in 180° degrees approximately.

APPENDIX

1-"The Swan", Charles Baudelaire - 1821 / 1867

(translated by James McGowan)

Andromache, I think of you -- this meagre stream,
This melancholy mirror where had once shone forth
The majesty of all your widowhood,
This fraudulent Simois, fed by bitter tears,

Has quickened suddenly my fertile memory
As I was walking through the modern Carrousel.
The old Paris is gone (the form a city takes
More quickly shifts, alas, than does the mortal heart);

I picture in my head the busy camp of huts,
And heaps of rough-hewn columns, capitals and shafts,
The grass, the giant blocks made green by puddle-stain,
Reflected in the glaze, the jumbled bric-à-brac.

==========

Andromaque, je pense à vous! ce petit fleuve,/ Pauvre et triste miroir où jadis resplendit/ L'immense majesté de vos doulers de veuve,/ Ce Simoïs menteur qui par vos pleurs grandit,/

A fécondé soudain ma mémoire fertile,/ Comme je traversais le nouveau Carroussel./ Le vieux Paris n'est plus (la forme d'une ville/ Change plus vite, hélas!, que le coeur d'un mortel);

Je ne vois qu'en esprit tout ce camp de baraques,/ Ces tas de chapiteaux ébauchés et de fûts,/ Les herbes, les gros blocs verdis par l'eau des flaques,/ Et brillant aux carreaux, le bric-à-brac confus.

Once nearby was displayed a great menagerie,
And there I saw one day -- the time when under skies
Cold and newly bright, Labour stirs awake
And sweepers push their storms into the silent air-

A swan, who had escaped from his captivity,
And scuffing his splayed feet along the paving stones,
He trailed his white array of feathers in the dirt.
Close by a dried out ditch the bird opened his beak,

Flapping excitedly, bathing his wings in dust,
And said, with heart possessed by lakes he once had
[loved:
'Water, when will you rain? Thunder, when will you
[roar?'
I see this hapless creature, sad and fatal myth,

==========

Là s'étailat jadis une ménagerie;/ Là je vis, un matin, à l'heure où sous les cieux/ Froids et clairs leTravail s'éveille, où la voirie/ Pousse un sombre ouragan dans l'air silencieux,

Un cygne qui s'était évadé de sa cage,/ Et, de ses pieds plamés frottant le pavé sec,/ Sur le sol raboteux traînait son blanc plumage./ Prés d'un ruisseau sans eau la bête ouvrant le bec

Baignait nerveusement ses ailes dans la poudre,/ Et disait, le couer plein de son beau natal:/ 'Eau, quand donc pleuvras-tu? quand tonneras-tu, foudre?'/ Je vois ce malheureux, mythe étrange et fatal,

Stretching the hungry head on his convulsive neck,

Sometimes towards the sky, like the man in Ovid's book-

Towards the ironic sky, the sky of cruel blue,

As if he were a soul contesting with his God!

II

Paris may change, but in my melancholy mood

Nothing has budged! New palaces, blocks, scaffoldings,

Old neighbourhoods, are allegorical for me,

And my dear memories are heavier than stone.

And so outside the Louvre an image gives me pause:

I think of my great swan, his gestures pained and mad,

Like other exiles, both ridiculous and sublime,

Gnawed by his endless longing! Then i think of you,

==========

Vers le ciel quelquefois, comme l'homme d'Ovide,/ Vers le ciel ironique et cruellement bleu,/ Sur son cou convulsif tendant sa tête avide,/ Comme s'il adressait des reproches à Dieu!

II

Paris change! mais rien dans ma mélancolie/ N'a bougé! palais neufs, échafaudages, blocs,/ Vieux faubourgs, tout pour moi devient allégorie,/ Et mes chers souvenirs sont plus lourds que des rocs.

Aussi devant ce Louvre une image m'opprime:/ Je pnse à mon grand cygne, avec ses gestes fous,/ Comme les exilés, ridicule et sublime,/ Et rongé d'un désir sans trêve! et puis à vous,

Fallen Andromache, torn from a husband's arms,
Vile property beneath the haughty Pyrrhus' hand,
Next to an empty tomb, head bowed in ecstasy,
Widow of Hector! O! and wife of Helenus!

I think of a negress, thin and tubercular,
Treading in the mire, searching with haggard eye
For palm trees she recalls from splendid Africa,
Somewhere behind a giant barrier of fog;

Of all those who have lost something they not find
Ever, ever again! who steep themselves in tears
And suck a bitter milk from that good she-wolf, grief!
Of orphans, skin and bones, dry and wasted blooms!

And likewise in the forest of my exiled soul
Old Memory sings out a full note of the horn!
I think of sailors left forgotten on an isle,
Of captives, the defeated...many others more!

==========

Andromaque, des bras d'un grand époux tmobée,/ Vil bétail, sous main du superbe Pyrrhus,/ Auprés d'un tombeau vide en extase courbée;/ Veuve d'Hector, hélas! et femme d'Hélénus!

Je pense à la négresse, amaigrie et phthisique,/ Piétinant dans la boue, et cherchant, l'oeil hagard,/ Les cocotiers absents de la superbe Afrique/ Derrière la muraille immense du brouillard;

A quiconque a perdu ce qui ne ce retrouve/ Jamais, jamais! à ceux qui s'abreuvent de pleurs/ Et tettent la Douleur comme une bonne louve!/ Aux maigres orphelins séchant comme des fleurs!

Ainsi dans la forêt où mon esprit s'exille/ Un vieux Souvenir sonne à plein souffle du cor!/ Je pense aux matelots oubliés dans une île,/ aux captifs, aux vaincus!...à bien d'autres encor!

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